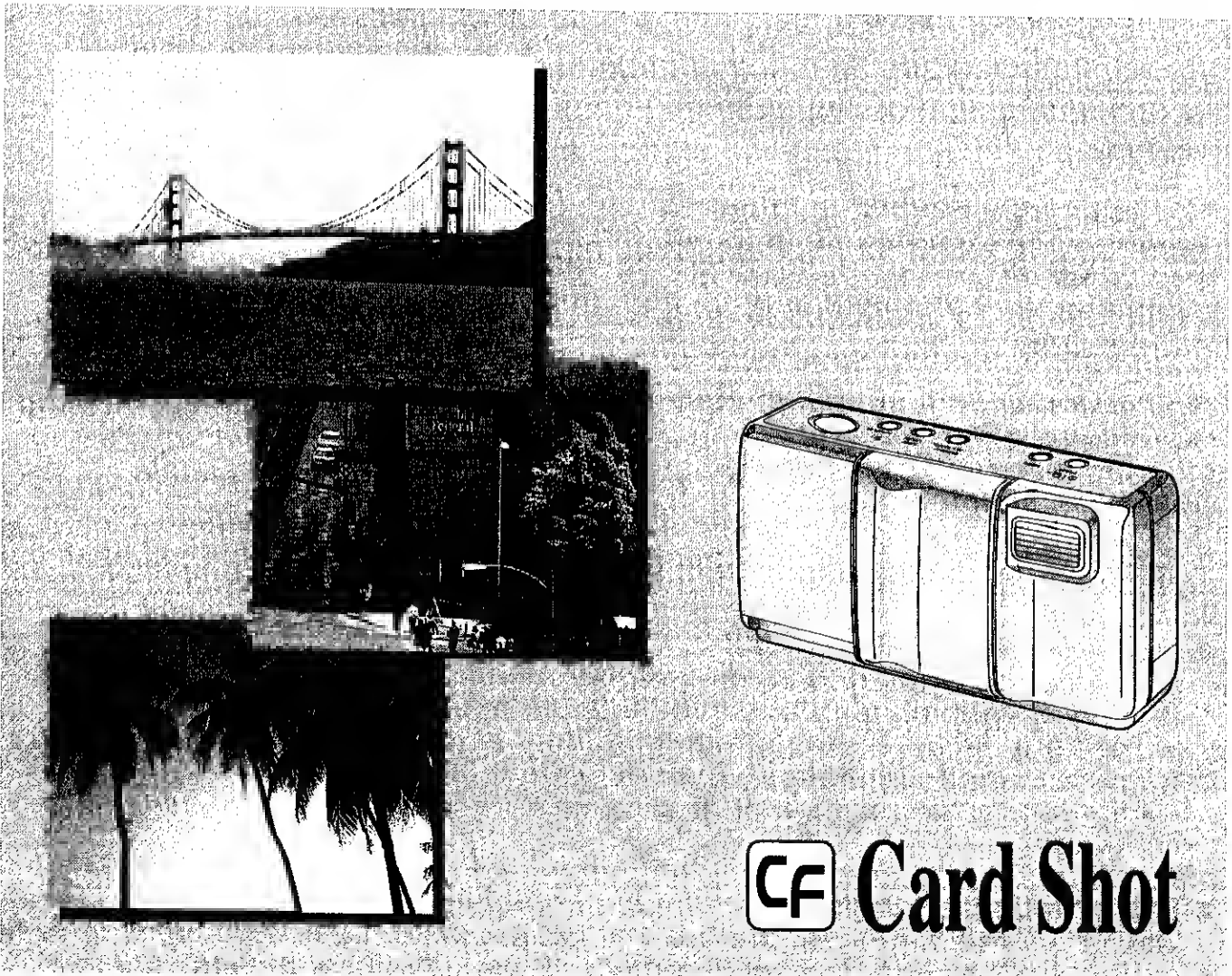


Panasonic

Digital Still Camera

Operating Instructions
Instrucciones de funcionamiento

Model No. **NV-DCF3** Series



CF Card Shot

Before use, please read these instructions completely.

VQT7389

Dear Customer (U.K. Only)

We would like to take this opportunity to thank you for purchasing this Panasonic Digital Still Camera.

Please read these Operating Instructions carefully and keep them handy for future reference.

Direct any inquiries to the below telephone numbers if using the NV-DCF3B within the U.K.

Panasonic

Customer Care Hot Line Digital Still Camera 08701 505610

Before operating this product, please ensure that you read the operating instructions completely.

If you require further assistance regarding the operation, or if the product requires repair, then please contact our Customer Care Hot Line by telephone between 9.00am and 5.30pm Monday to Friday.

This Hot Line number is for calls relating to this product only. For other product categories, please contact your selling dealer for assistance.

Important

■ Take some test shots beforehand.

For important events (such as a wedding ceremony), be absolutely sure to take one or more test shots before shooting for real to ensure that the product is working properly.

■ No guarantees can be given for what you choose to shoot.

The manufacturer offers no guarantees for shooting failures due to trouble occurring in the camera or a CF card.

■ Please respect all copyrights.

Whatever you have shot with this camera can be used for your personal amusement only: under the copyright laws, it cannot be used without obtaining permission from the holders of the copyrights. Restrictions may apply to the shooting of certain subject even if it is for your own personal amusement.

Information for Your Safety

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE ONLY THE RECOMMENDED ACCESSORIES AND DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

FOR YOUR SAFETY

■ DO NOT REMOVE OUTER COVER.

To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

Digital Still Camera

- The rating plate is on the rear side of the Digital Still Camera.

AC Adaptor

- The rating plate is on the top side of the AC Adaptor.
- As this equipment gets hot during use, operate it in well ventilated place; do not install this equipment in a confined space such as a book case or similar unit.

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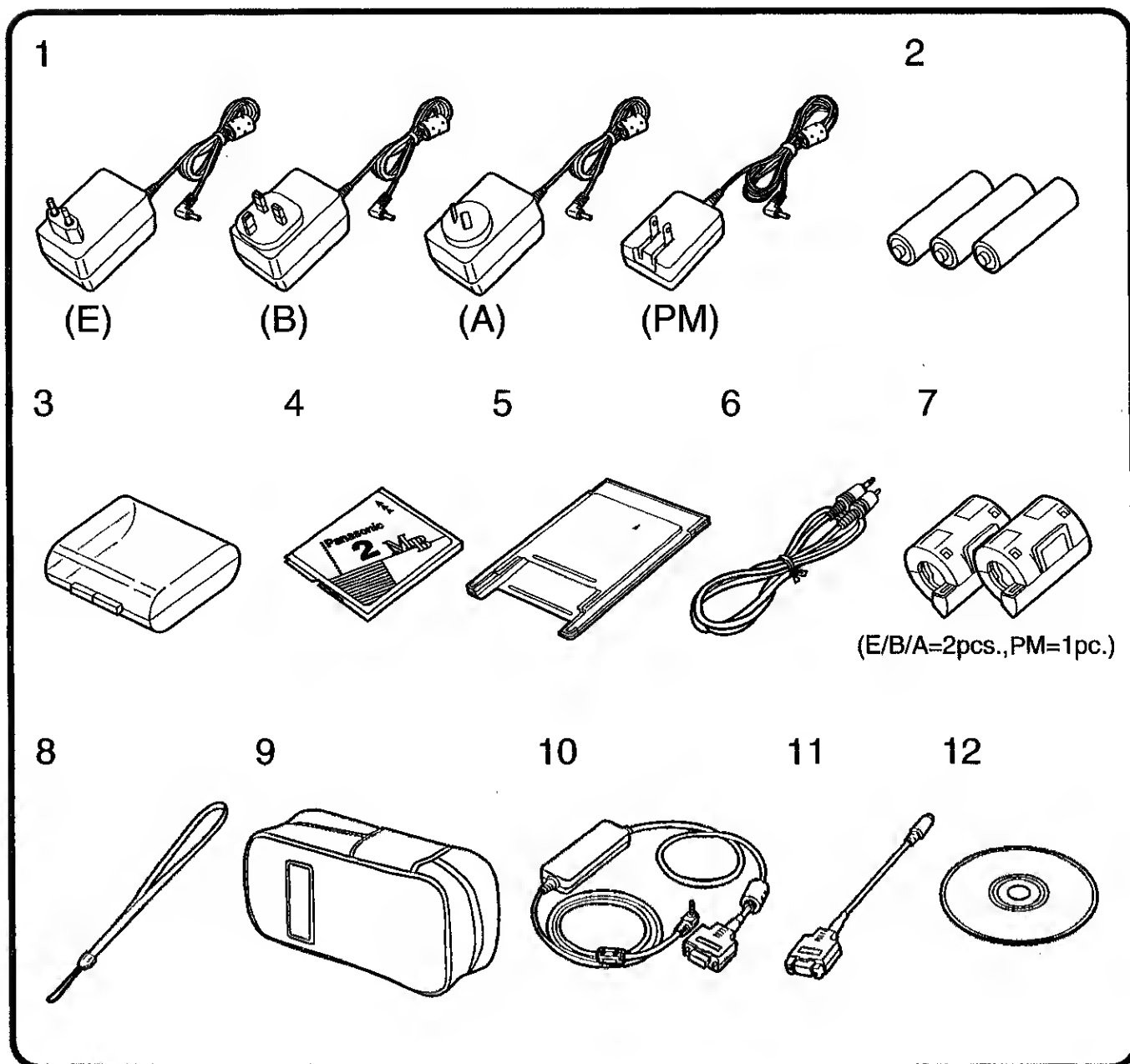
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Precautions, etc.

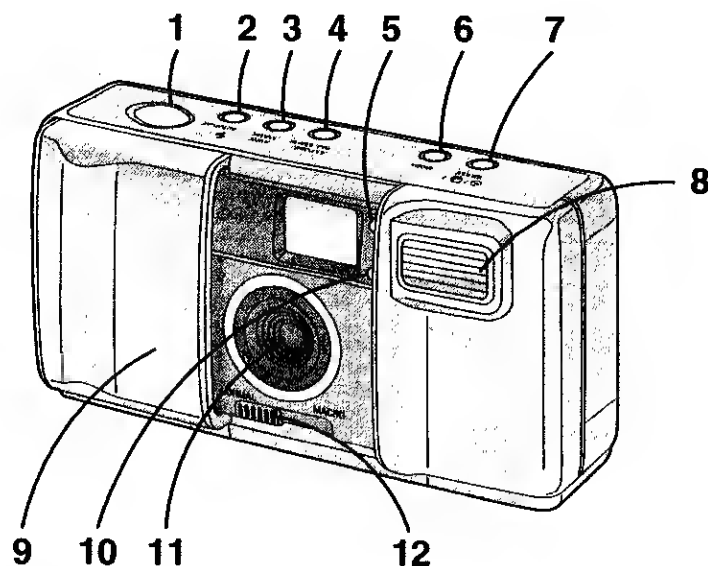
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- "Microsoft Windows" is a trademark of Microsoft Corporation in the United States.
- The name "Apple" Macintosh, and System are either registered trademarks or trademarks of Apple Computer Inc.
- PhotoEnhancer is a trademark of PictureWorks.
- Other model names, company names, product names, etc. mentioned in this manual are either the trademarks or registered trademarks of the companies concerned.



Standard Accessories

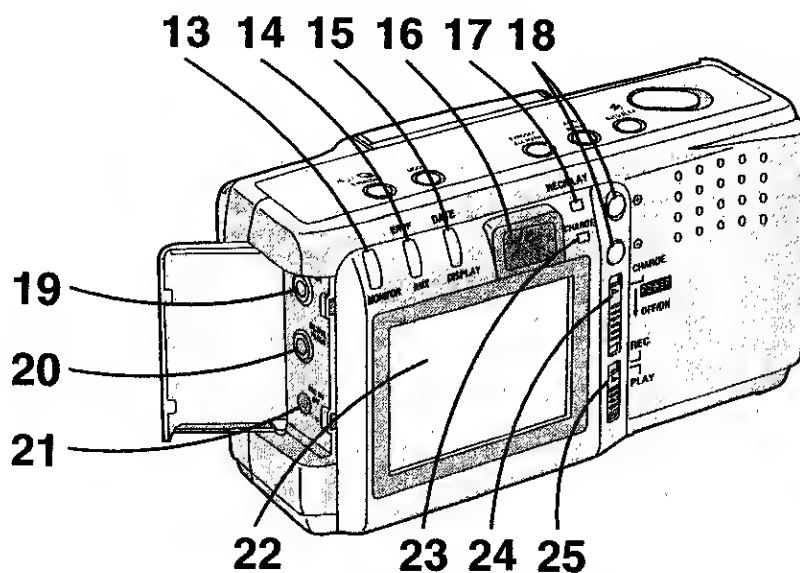
- 1 AC Adaptor (→ 11)
[NV-DCF3E: VSK0475, NV-DCF3B: VSK0476, NV-DCF3A: VSK0477, NV-DCF3PM: VSK0471]
- 2 Rechargeable Ni-Cd Batteries (→ 12)
[NV-DCF3E/B: P-3GAVE/BA1, NV-DCF3A/PM: P-3GAVT/BA1]
- 3 Batteries Case (→ 60) [VYK7544]
- 4 CF (Compact Flash) Card (2 MB) (→ 13) [SDCFB-2P1]
- 5 PCMCIA Adaptor (→ 46) [BN-CFADP]
- 6 Video Output Cord (→ 25) [VJA1007]
- 7 Clamp Filter (→ 11, 26) [VLP0120]
- 8 Hand Strap (→ 15) [VGQ4785]
- 9 Soft Case (→ 16) [VFC2716]
- 10 Interface Adaptor (→ 45, 52) [VFA0288] *VFA0288*
- 11 Conversion Cable for Macintosh (→ 52) [VJA1049]
- 12 CD-ROM (→ 47, 49, 53, 54) [VFF0040]



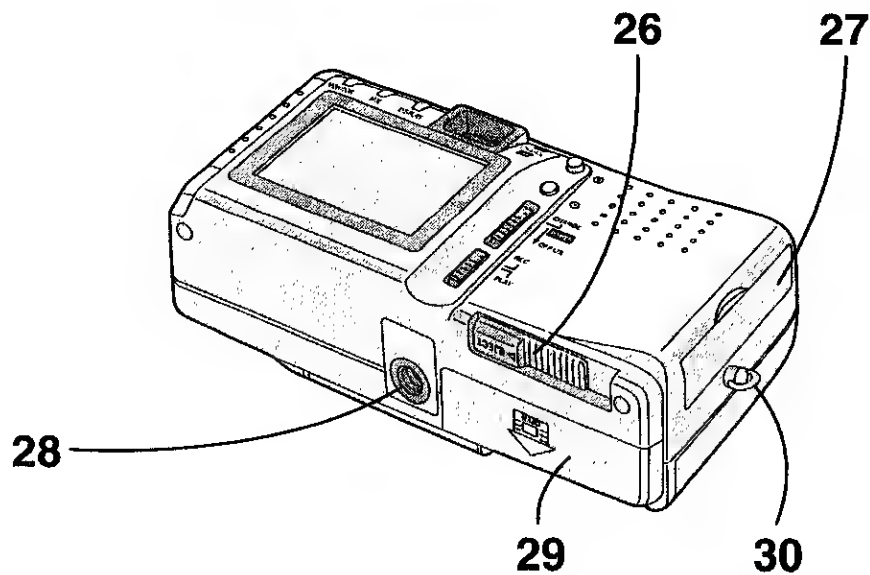
Controls and Components

Main Unit

- 1 SHUTTER Button (→ 19)
- 2 (Flash)/AUTO PLAY Button (→ 28, 36)
- 3 AWB (Auto White Balance)/MARK Button
(→ 31, 36, 41)
- 4 EXPOSE/ALL MARK Button
(→ 29, 36, 41)
- 5 Light Sensor (→ 28)
- 6 MODE Button (→ 30, 33, 34)
- 7 (Self-timer)/ (Continuous shooting)/
ERASE Button (→ 29, 38, 39)
- 8 Flash Emitter (→ 28)
- 9 Lens Cover (→ 19)
- 10 Self-timer Lamp (→ 29)
- 11 Lens
- 12 NORMAL/MACRO Lever (→ 30)



- 13 MONITOR Button (→ 22)
- 14 E/N/F/MIX Button (→ 21, 37)
- 15 DATE/DISPLAY Button (→ 17, 20, 24)
- 16 Viewfinder (→ 19)
- 17 REC/PLAY Lamp (→ 17, 19, 23)
- 18 \oplus/\ominus Buttons (→ 17, 23)
- 19 VIDEO OUT Terminal (→ 25)
- 20 DIGITAL IN/OUT Terminal (→ 45, 52)
- 21 DC IN (Input) Terminal (→ 11)
- 22 LCD Screen (→ 8)
- 23 CHARGE Lamp (→ 12)
- 24 CHARGE/POWER Switch
(→ 12, 17, 19, 23)
- 25 REC/PLAY Switch (→ 17, 19, 23)



26 EJECT (CF Card Eject) Lever (→ 14)

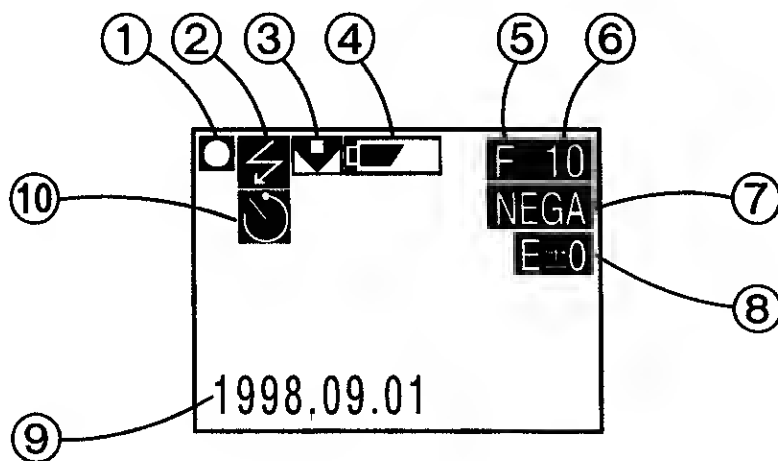
27 CF Card Insertion Port (→ 13)

28 Tripod Socket

Used when securing the camera to a tripod.

29 Battery Housing (→ 10)

30 Hand Strap Holder (→ 15)



LCD Screen

(The display shown above is for explanatory purposes only and may differ from the actual display.)

① Image Marking/Auto Playback Mode (→ 36, 41)

- Appears during playback when an image is marked by pressing the AWB/MARK Button or EXPOSE/ALL MARK Button.
- Lights up red during automatic playback.

② Type of Flash (→ 28)

- Redeye reduction
 - No flash
 - Always on
 - Automatic
- (The Flash Emitter lights according to the amount of light. If the flash is needed, the [] display lights up red beforehand.)

③ White Balance (→ 31)

Appears when the white balance is adjusted manually.

④ Remaining Battery Charge

Lights up when the remaining charge has dropped. Flashes for 5 sec. when the remaining charge runs out, after which the power turns off. While lit up, the Remaining Battery Charge Mark can be turned off by pressing the DATE/DISPLAY Button.

⑤ Image Quality Mode (→ 21)

F...Fine
N...Normal
E...Economy

- During shooting, the currently selected mode appears.

- During playback, the mode selected when each image was shot appears.

⑥ During Shooting...Number of Frames Left to Shoot (→ 20)

Indicates how many frames can still be taken.

During Playback...Playback Image Number (→ 24)

The sequence in which the images were shot appears here. When an image is deleted, the number of each subsequent image decreases by one.

⑦ NEGA (→ 33)

During shooting, this display appears when the MODE Button is pressed twice to select the NEGA (Negative) mode.

⑧ Exposure Compensation (→ 29)

During shooting, the compensation value appears here when the EXPOSE/ALL MARK Button is pressed.

⑨ Date/Time (→ 18)

Each time the DATE/DISPLAY Button is pressed, this display changes in the following order:

⑤ Image quality mode+⑥ number of frames left to shoot (during playback, the playback image number)+Date→

⑤+⑥+Time→

No display→

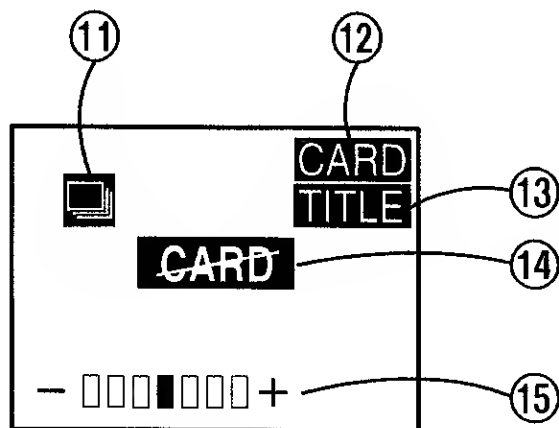
Date→

Time→

⑤+⑥→...

⑩ Self-Timer (→ 29)

This display appears during Self-timer shooting.



⑪ Continuous Shooting (→ 27)

This display appears when the Continuous Shooting mode is selected.

⑫ No CF card

Appears when no CF card has been inserted. When this display appears, please insert a CF card.

⑬ Mix (→ 37)

During playback, the display "TITLE" appears when the E/N/F/MIX Button is pressed.

**⑭ Warning/Operation Display
CARD (→ 13)**

Flashes when a damaged or otherwise unusable card has been inserted.

ERASE (→ 38)

Lights up when deleting images one frame at a time.

ALL ERASE (→ 39)

Lights up when deleting all images at once.

FORMAT (→ 40)

Lights up when the inserted CF card has an incompatible format. Flashes while a CF card is being formatted.

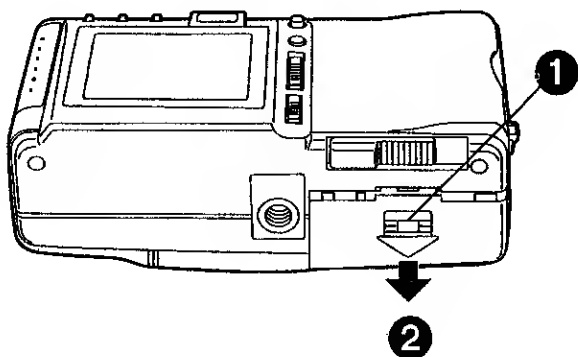
PC

Lights up when data are transferred to a personal computer.

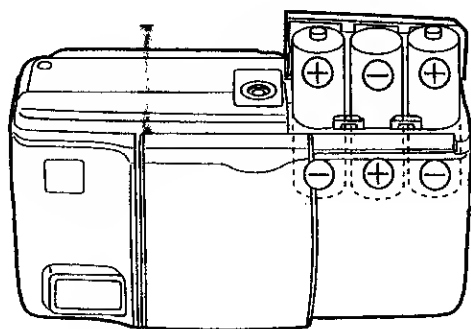
⑮ LCD Screen brightness (→ 22)

Press the ⊕ or ⊖ Button to adjust brightness. Brightness increases each time the ⊕ Button is pressed and decreases each time the ⊖ Button is pressed.

1



2



Inserting Alkaline Batteries (not supplied)

■ When you want to use the camera (without rechargeable batteries)

1

Open the battery lid.

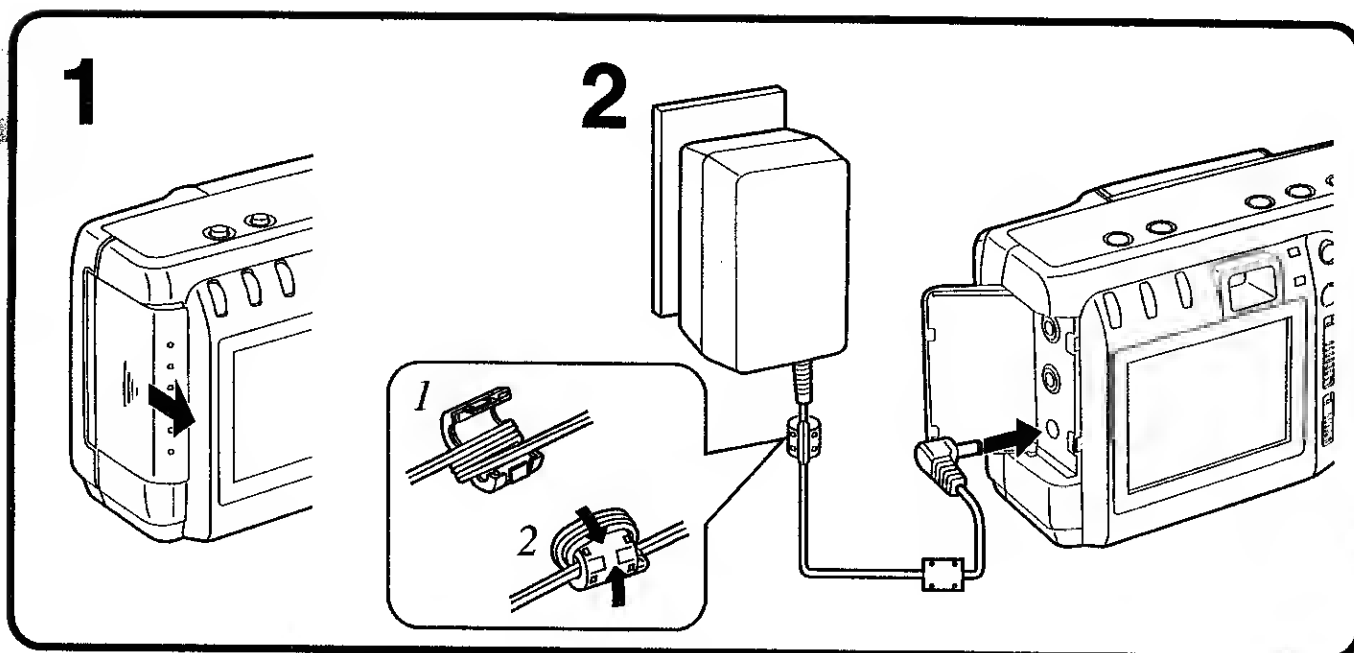
- ① Hold down the OPEN Button and,
- ② Slide the lid in the direction of the arrow.

2

Insert the batteries and close the lid.

Check that the \oplus and \ominus polarities of the batteries are aligned correctly.

- Be sure to use size "LR6" alkaline (or lithium) dry batteries.
- Turn off the camera's power before inserting or removing the dry batteries. If the lens cover is open, close it before inserting the dry batteries.
- If the AC Adaptor is connected, disconnect it before inserting the dry batteries.
- Do not touch the metal components inside the battery compartment.
- Due to their characteristics, alkaline batteries tend to run down in a short time when they are used at low temperature (10°C centigrade or below).
Use of the rechargeable Ni-Cd batteries (supplied) is recommended for such locations.
- When the camera is to be stored, remove the dry batteries.



Connecting the AC Adaptor (supplied)

■ When using indoors

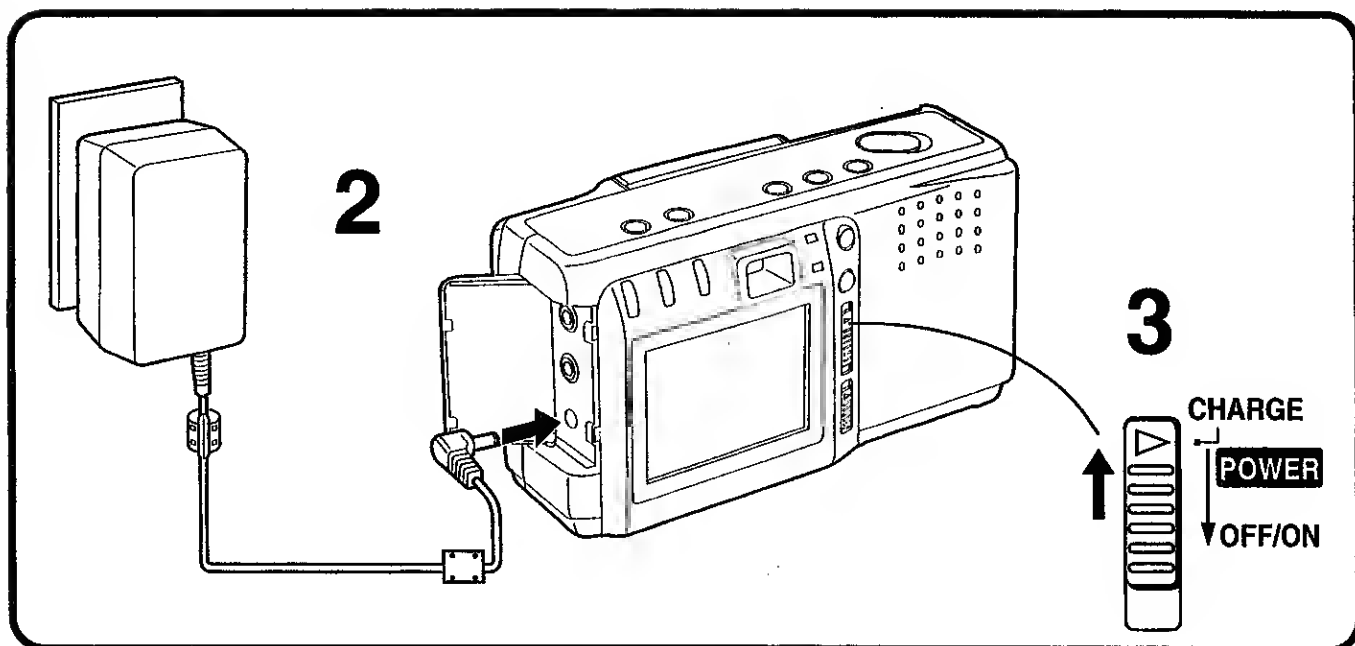
- 1** Open the cover.
- 2** Connect the AC Adaptor's DC plug into the DC IN Terminal and connect the power plug to a power outlet.

- Be sure to use only the AC Adaptor that is supplied with the camera.
- Before proceeding with the connections, check that the camera's power is off. If the lens cover is open, close it before connecting the AC Adaptor.
- If the camera is not going to be used, be sure to disconnect the AC Adaptor.

Precautions for Connecting the Clamp Filter (supplied) [NV-DCF3E/B/A only]

Using the camera near a television or radio may cause reception interference. To reduce these unnecessary radio waves, attach the Clamp Filter to the AC Adaptor's cord.

- 1. Wrap the cord around the Clamp Filter twice so that the Clamp Filter is as close as possible to the AC Adaptor.**
- 2. Close the Clamp Filter.**
When closing, make sure the Clamp Filter does not pinch the cord.



Charging the Ni-Cd Batteries (supplied)

The AC Adaptor (supplied) is needed to charge the Ni-Cd batteries.

Since the Ni-Cd batteries are not charged when the camera is purchased, they must first be charged by connecting the AC Adaptor to the camera.

1 Insert the rechargeable Ni-Cd batteries.

- How to insert (→ 10)
- Check that the \oplus and \ominus polarities of the batteries are aligned correctly, and insert the batteries properly.

2 Connect the AC Adaptor.

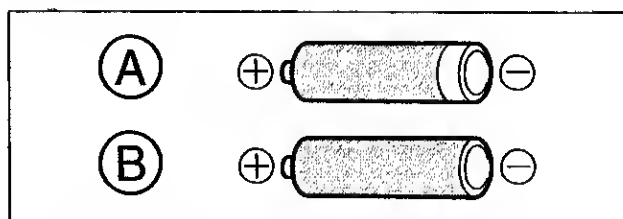
3 Set the CHARGE/POWER Switch to the "CHARGE" position.

The CHARGE Lamp lights up and charging begins. The batteries are charged inside the camera. About 5 hours after charging begins, the CHARGE Lamp turns off.

- Use only the supplied Ni-Cd batteries for this camera.
- Charging is not possible while the camera's REC/PLAY Lamp is lit, indicating that the camera's power is on. If the power is on, move the CHARGE/POWER Switch to the "CHARGE" position to turn on the CHARGE Lamp and begin charging.

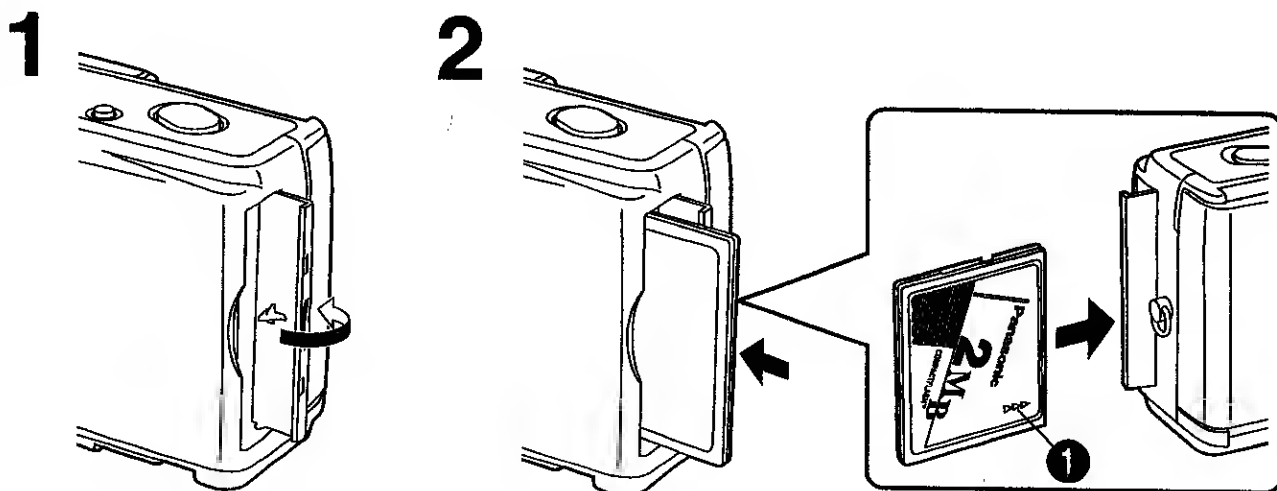
- After charging is completed, if the camera is not going to be used for a long time, remove the Ni-Cd batteries.
- Moving the CHARGE/POWER Switch to the "CHARGE" position will start charging only if the rechargeable Ni-Cd batteries are inside the camera and the AC Adaptor is connected.
- To ensure safety, this camera makes it impossible to recharge any batteries other than the exclusive Ni-Cd batteries.
- When using the camera away from home, be sure to take extra batteries with you. Also be sure to take the AC Adaptor with you when traveling so that you can recharge the rechargeable Ni-Cd batteries wherever you may be.

Important note on using rechargeable batteries/dry cells



- (A) Rechargeable Ni-Cd batteries (supplied)
- (B) Standard dry cells/Rechargeable batteries

As a safety feature this product is equipped with a device that makes it impossible to charge standard batteries. In order to prevent damage, before purchasing new batteries please check to make sure that their external appearance is as shown in the illustration on the above.



Inserting the CF Card

(2 MB, supplied)

Turn off the camera's power before inserting the CF card.

1 Open the cover.

2 Insert the CF card and close the cover.

Insert the CF card in the direction of the "▲" mark ❶ as shown in the figure. Insert the card as far as it will go.

● "Compact Flash" is a trademark of the SanDisk Corporation. The compatibility of some commercially available Compact Flash cards has not been verified. Products bearing the "SanDisk" logo have been verified as compatible.

■ About the CF Card (sold separately)

Panasonic offers the VW-CF4E CF Card (4 MB capacity) (sold separately).

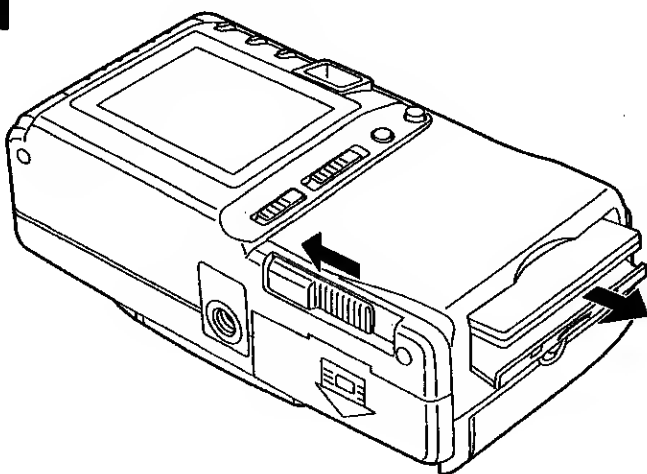
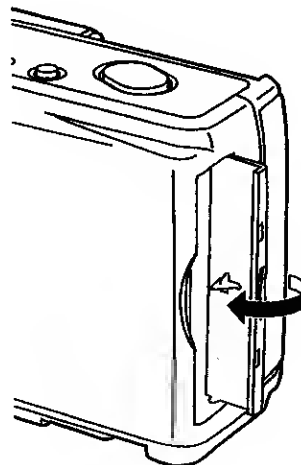
● Do not remove the CF card immediately after pressing the SHUTTER Button (while a shot image is being recorded), during deleting (while ERASE or ALL ERASE is flashing), or during formatting (while FORMAT is flashing). Doing so will damage the card's format and make it unusable.

● Make sure not to insert the CF card the wrong way around.

● Be sure to close the lid after inserting or removing a CF card.

● If the camera's power is on when a card is inserted or removed, the camera will automatically turn off.

● The "CARD" display flashes in the upper right-hand corner of the LCD Screen when the camera's power is turned on but no card has been inserted. The "**CARD**" display flashes in the center of the LCD Screen when an unusable card has been inserted.

1**2**

■ Ejecting

1

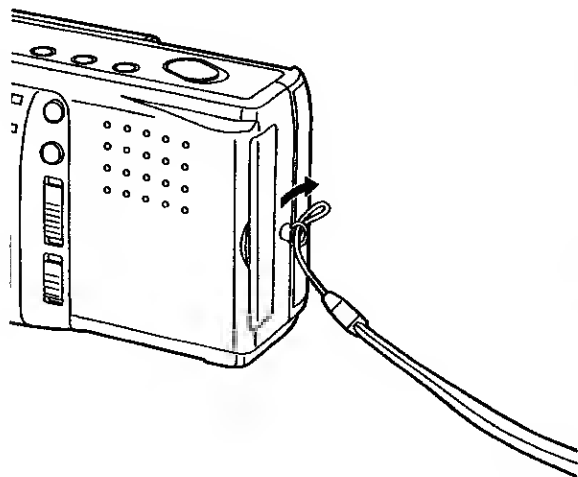
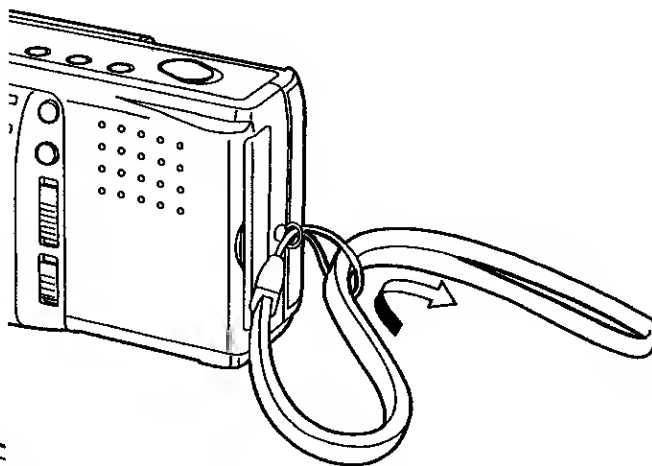
Slide the EJECT Lever in the direction of the arrow.

The card is ejected.

2

Close the lid.

- If the card cannot be removed readily after sliding the EJECT Lever, try pushing the card back in and then slide the EJECT Lever again.

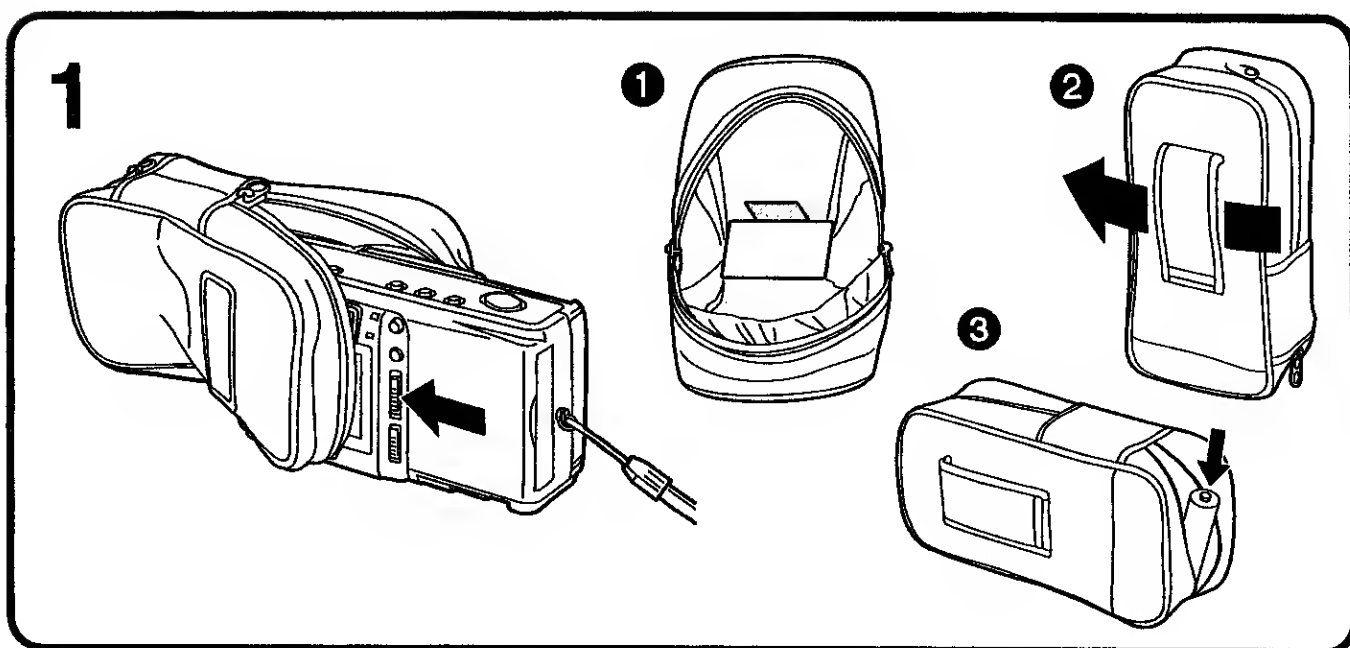
1**2**

Attaching the Hand Strap **(supplied)**

Attach the Hand Strap as shown in the above figure. Pass your hand through it when using the camera to avoid accidentally dropping the camera.

- 1** Pass the end of the Hand Strap through the Hand Strap Holder fixing on the camera.
- 2** Pass the other end of the Hand Strap through the Hand Strap loop that has been passed through the fixing, and then pull it tight.

- When holding the camera by the Hand Strap and allowing it to dangle freely, take care not to bang the camera against nearby objects.
- When holding the camera while wearing gloves, always pass your hand through the Hand Strap to avoid dropping the camera in case it slips out of your hand.



Putting the camera into the Soft Case (supplied)

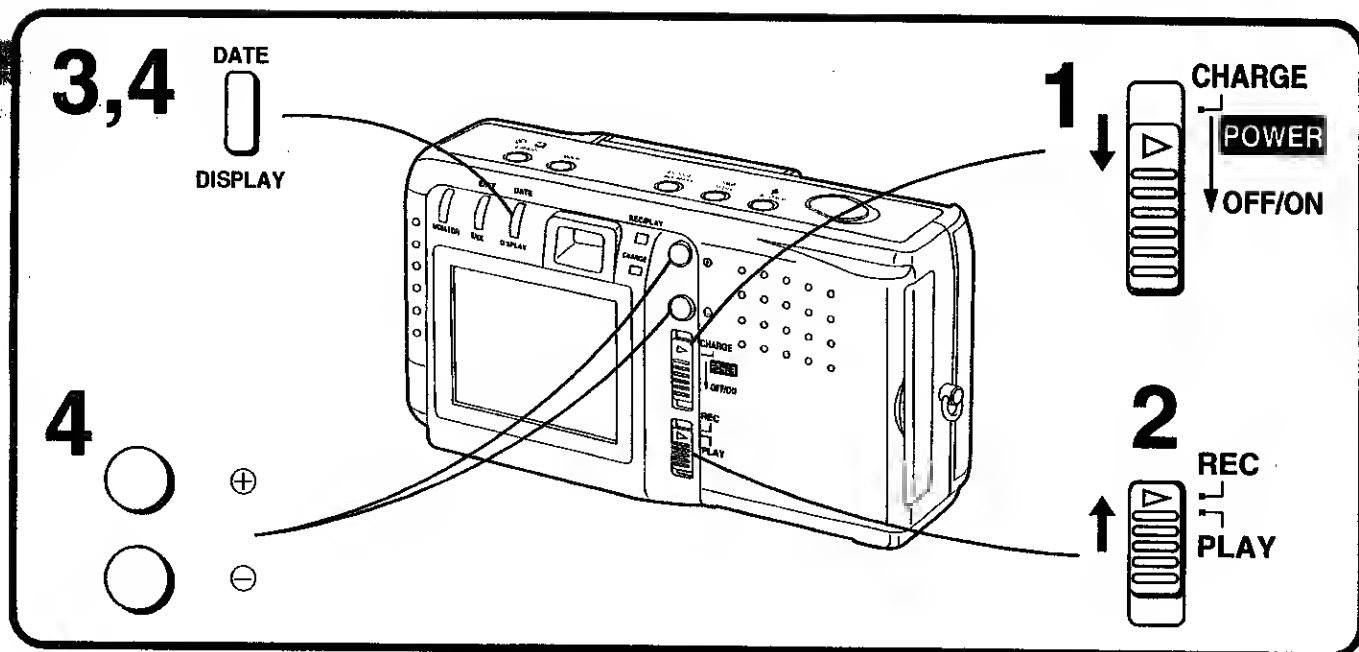
The Soft Case is supplied to protect the camera when not in use.

- 1 Put the camera into the Soft Case in the direction shown in the figure, then close the zipper.**

- **If you have trouble putting the camera into the Soft Case**

Adjust the positions of the Velcro fasteners inside the Soft Case so that the camera is easier to put inside (❶).

- You can secure the camera to your waist by passing your belt through the loop (❷).
- Spare batteries can be carried in the end compartment (❸).



Setting the Date and Time

When the unit is shipped, the date and time are pre-set to January 1, 2000, 12:00 p.m., and so you must set the current date and time yourself. The year can be set between 1996 and 2037. The time is displayed in the 24-hour system.

- 1 Turn on the camera's power.**
The switch automatically returns to its original position.
- 2 Set to the "REC" position.**
The REC/PLAY Lamp lights red.
- 3 Hold down the DATE/DISPLAY Button for at least 2 seconds.**
The date display appears on the LCD Screen with the year display flashing.
- 4 Use the \oplus and \ominus Buttons to adjust the setting, and then press the DATE/DISPLAY Button to go to the next item. The order is Year→Month→Day→Hour→Minute.**

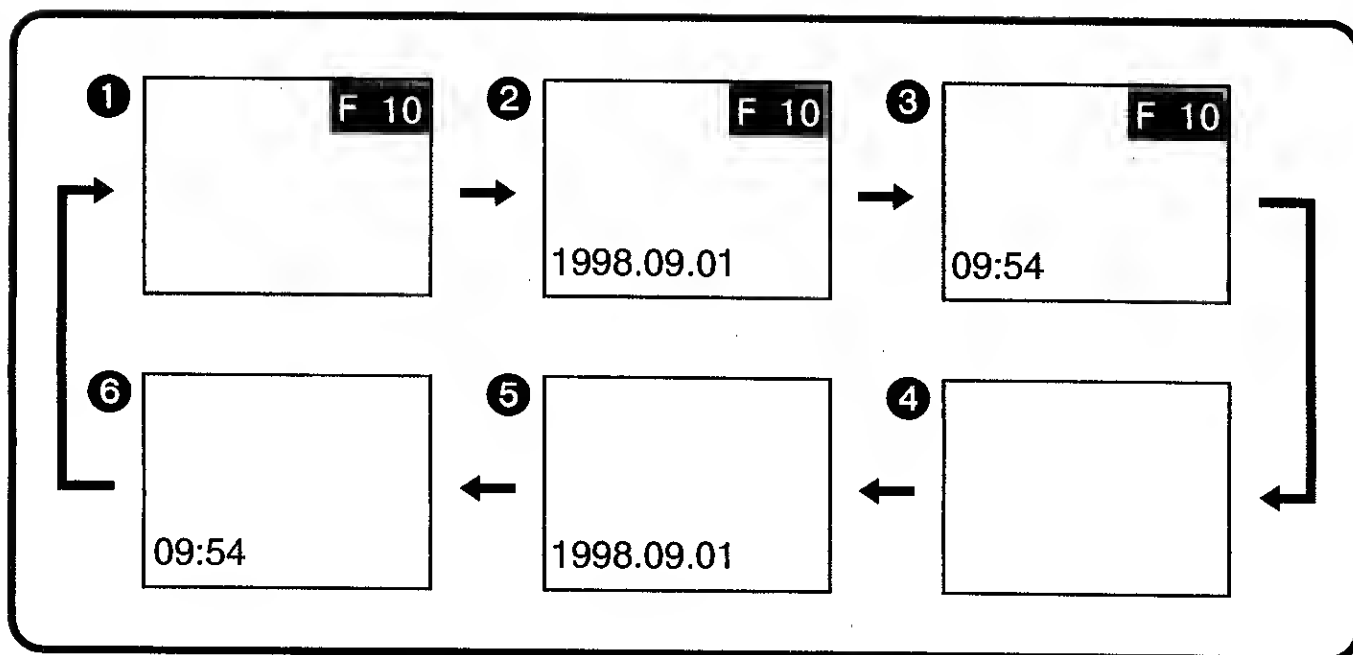
Year: 1996→1997→...→2037→1996→...
Month: 01→02→...→12→01→...
Day: 01→02→...→31→01→...
Hour: 00→01→...→23→00→...
Minute: 00→01→...→59→00→...

- The clock starts when you press the DATE/DISPLAY Button after setting the minutes.

- Even if the battery is removed and the AC Adaptor is disconnected, the camera's internal backup power supply will store the settings for approximately five minutes. When the backup power supply runs down, the settings are cleared.

When this happens, reset the date and time.

- You can change a numeral continuously by holding down the \oplus or \ominus Button.
- When setting the day of the month, the numerals 1 through 31 are displayed for each month, but this is not indicative of a malfunction. The day is automatically corrected when the setting is entered. (For example, February 31 is automatically corrected to March 1.)
- Setting is not possible when the REC/PLAY Switch is in the "PLAY" position.
- Even when images are shot with the date and time display turned off, the date and time of shooting are automatically recorded and can be displayed during playback.
- If the camera is set to shoot when the date and time have not been set or the setting has been cleared from the memory, the display "2000.01.01" appears on the LCD Screen (time=12:00 p.m.) and will be recorded with any image shot in this state.



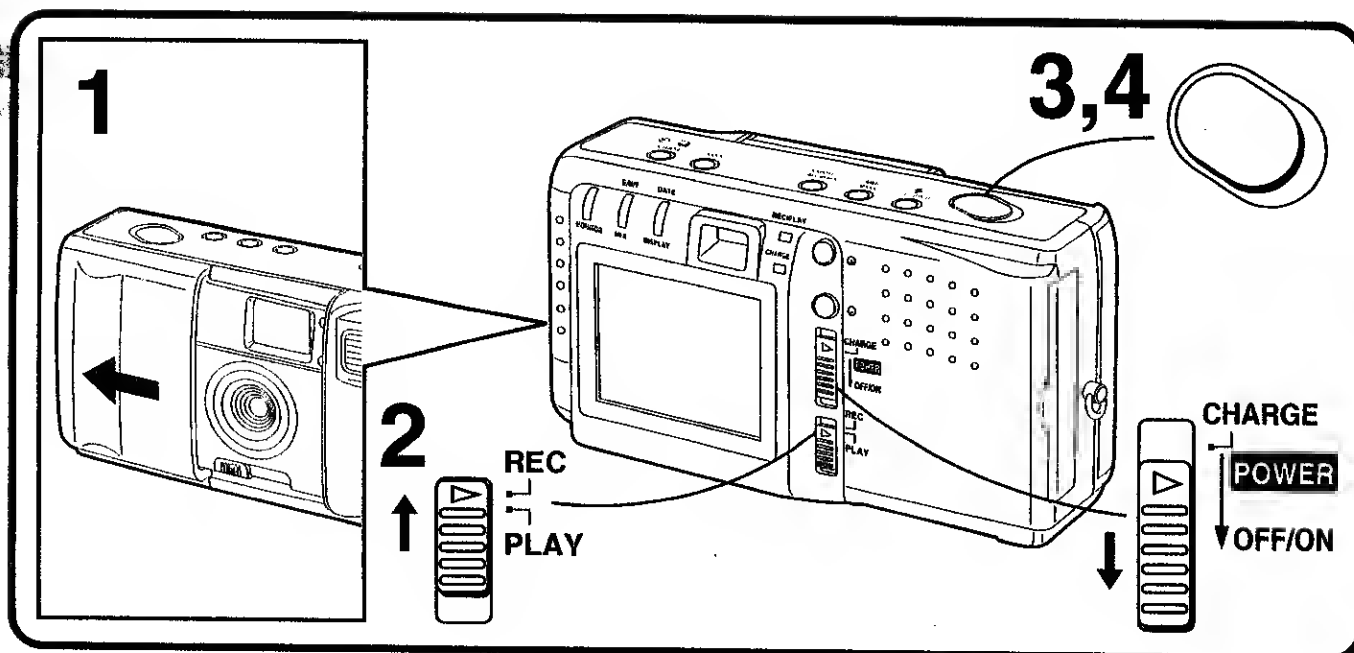
Changing the Date or Time Setting

1. Hold down the DATE/DISPLAY Button for at least 2 seconds to make the year display begin flashing.
2. Press the DATE/DISPLAY Button repeatedly until the setting you wish to change begins flashing.
3. After changing the minute display, press the DATE/DISPLAY Button.

Date/Time Display Sequence

Each time the DATE/DISPLAY Button is pressed, the date/time display changes in the following order:

- ① Image quality mode+Number of frames left to shoot
 - ② Image quality mode+Number of frames left to shoot+Date
 - ③ Image quality mode+Number of frames left to shoot+Time (hour and minute)
 - ④ No display
 - ⑤ Date
 - ⑥ Time (hour and minute)
- The date and time cannot be displayed simultaneously.



Shooting

Images can be shot while looking at the LCD Screen, without looking through the viewfinder (when the LCD Screen is turned on). (→ 22)

- Do not block or cover the lens or the Flash Emitter with your fingers.
- Do not expose the lens to direct sunlight.
- Do not apply pressure to the LCD Screen or subject it to strong impact.

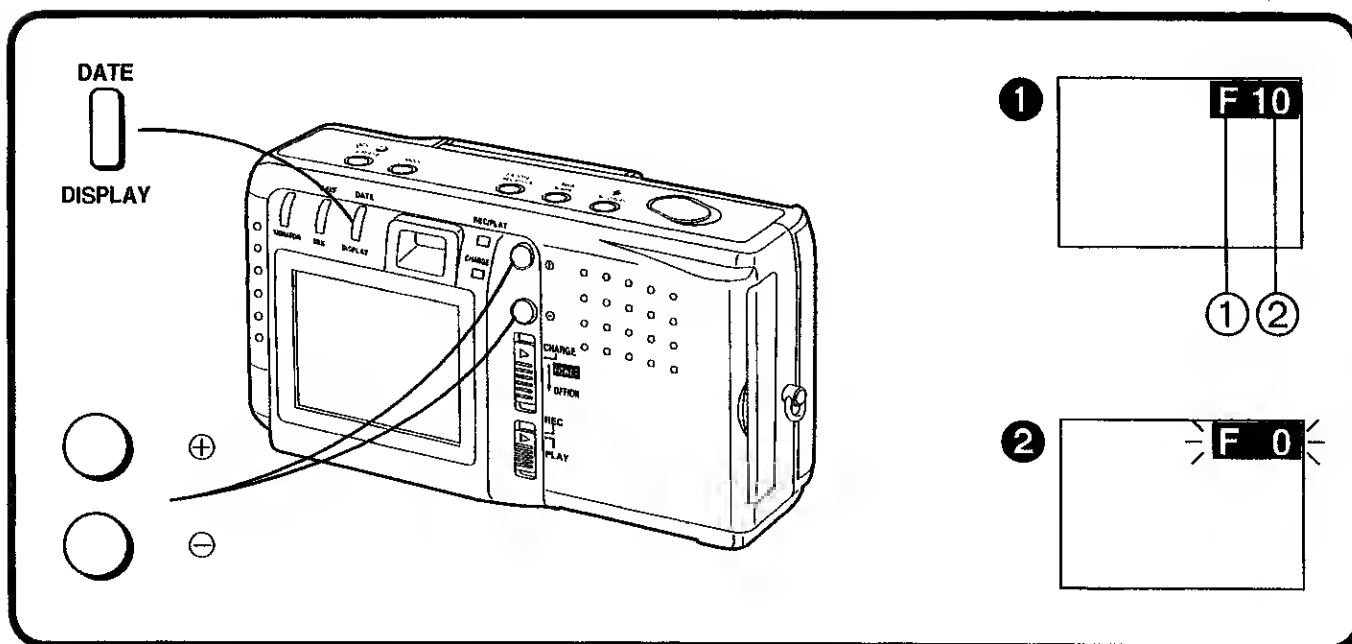
1 Open the lens cover.
Slide the lens cover as far as it will go. The camera's power will automatically turn on.

2 Set to the "REC" position.
The REC/PLAY Lamp lights red.

3 Press the SHUTTER Button.
During image recording, the shot image is displayed for approximately 5 seconds (or 12 seconds if the LCD Screen is turned on).

4 To shoot another image right away, Press the SHUTTER Button.
Even if the SHUTTER Button is pressed while the previous image is still being recorded, the new image will be displayed. (The next image can be shot up until the REC/PLAY Lamp begins flashing.)

- When opening the lens cover, open it as far as it will go.
- When using the viewfinder, there may be slight displacement between the viewfinder image and the shot image.
- If you close the lens cover between shots, the camera power will automatically turn off after a few seconds even if the CHARGE/POWER Switch is not in the "OFF" position. When the power turns off, opening the cover will automatically turn on the power.
- When the power supply runs out while the lens cover is open, move the CHARGE/POWER Switch to the "ON" position.
- The Flash Emitter automatically flashes when the surroundings are too dark (when set to Automatic). (→ 28)
- If the power is left on for more than approximately one minute and no operation is performed, the power turns off automatically as an electricity-conserving feature (Auto Power Off). To operate the camera after this happens, move the CHARGE/POWER Switch to the "ON" position.
- Do not disconnect the AC Adaptor or remove the batteries immediately after pressing the SHUTTER Button (while the shot image is being recorded). Doing so will damage the card's format and make it unusable.
- Do not connect anything to the DIGITAL IN/OUT Terminal or the VIDEO OUT Terminal when the REC/PLAY Switch is set to "REC".



■ Turning the Shutter Sound On or Off

The short beep emitted when the SHUTTER Button is pressed can be turned on or off. When the unit is shipped, the shutter sound is on.

Hold down the \oplus and \ominus Buttons simultaneously for at least one second.

- A beep is emitted, indicating that the setting has changed.
- The shutter sound volume cannot be changed.

Operation Time

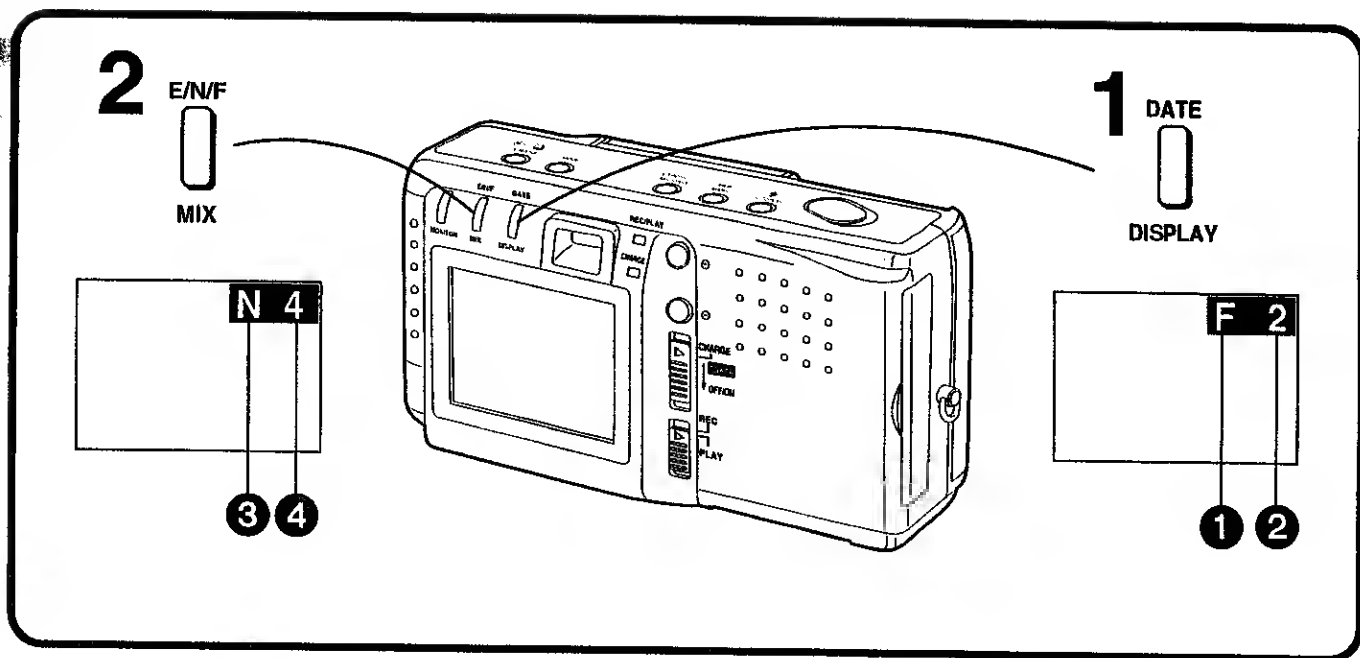
(LCD Screen on, temperature 20°C)

	Shooting mode	Playback mode
When using Panasonic Alkaline Dry Batteries	60 minutes (approx.)	110 minutes (approx.)
When using Rechargeable Ni-Cd Batteries (supplied)	55 minutes (approx.)	85 minutes (approx.)

Actual operation time may be less depending on operating conditions and other factors.

Image Quality Mode and the Number of Frames Left to Shoot Display

- 1 Press the DATE/DISPLAY Button repeatedly to turn the displays on and off.
 - ① Image quality mode
 - ② Number of frames left to shoot
- 2 The display begins flashing when the number of frames left to shoot reaches "0" (no more images can be shot).



Switching the Image Quality Mode for Shooting

The resolution of the image to be shot can be changed.

1 Press the DATE/DISPLAY Button repeatedly until the image quality display appears.

- ① Current image quality mode (example: F (Fine))
- ② The number of frames left to shoot in the F (Fine) mode.

2 Select the mode by pressing the E/N/F/MIX Button.

Each time this button is pressed, the mode changes in the following order:
F (Fine)→N (Normal)→E (Economy)→F.

- ③ Example: When N (Normal) has been selected.
- ④ Number of frames left to shoot in the N (Normal) mode.

Relationship between Image Quality Mode and Number of Frames

When using the supplied CF card (2MB):

- F (Fine): 11 frames (approx.)
- N (Normal): 23 frames (approx.)
- E (Economy): 47 frames (approx.) (NV-DCF3E/B/A)
- E (Economy): 59 frames (approx.) (NV-DCF3PM)

- The number of frames given above for each mode applies when all the frames are shot in the same mode.
- Depending on the types of subjects you photograph, it may be possible to take more shots. (Sometimes, the number of frames left to shoot does not decrement after an image is shot.)
- Using a larger-capacity commercially available CF card allows you to shoot even more frames.

There are three image quality modes. Select the right one for the type of images you wish to shoot.

F (Fine)

Use this mode for important shots you plan to keep permanently or when you plan to edit the image on a personal computer.

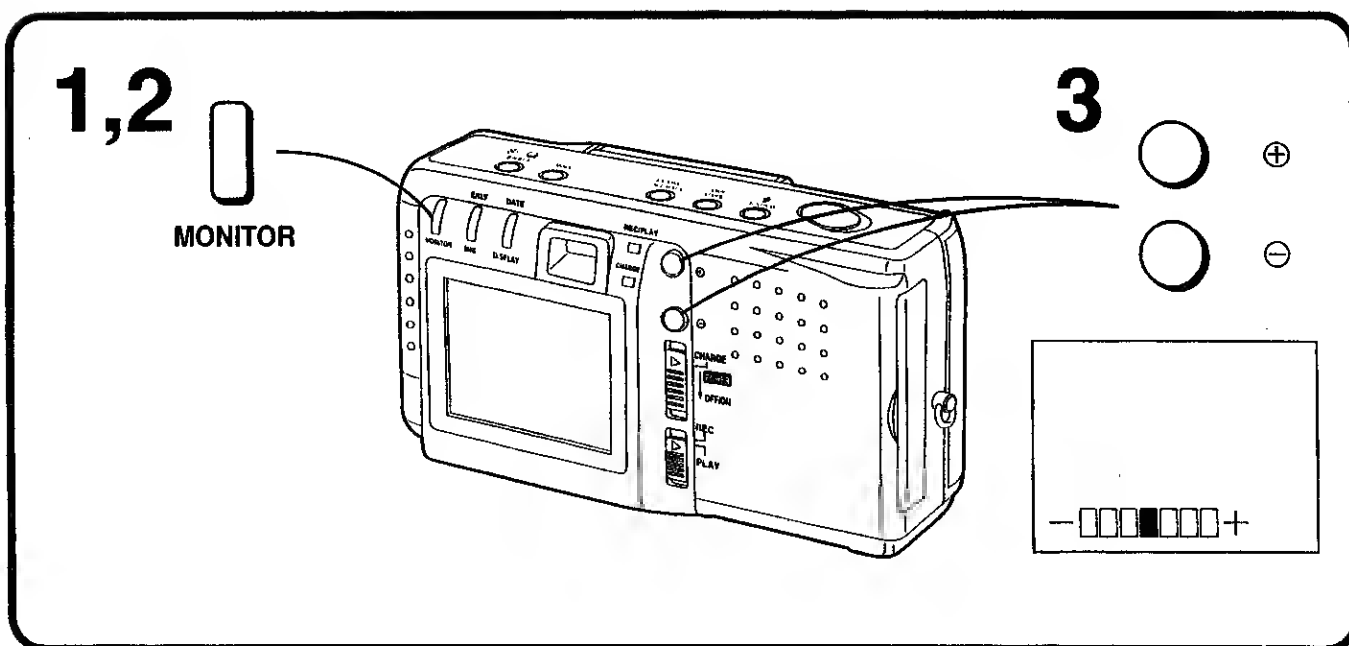
N (Normal)

Select this mode for normal use.

E (Economy)

This mode is for shooting images you plan to keep only temporarily (and delete later), or when you want a larger number of frames for shooting.

- The image quality mode can be switched at any time. However, the mode cannot be changed when the LCD Screen is off.



Turning the LCD Screen On and Off/Adjusting the LCD Screen Brightness

If you are looking through the viewfinder during shooting, the LCD Screen can be turned off in order to save battery power.

- 1 Press the MONITOR Button.**
Each time this button is pressed, the LCD Screen turns on or off. When the camera's power is turned off, the LCD Screen status (on or off) is stored in the memory.

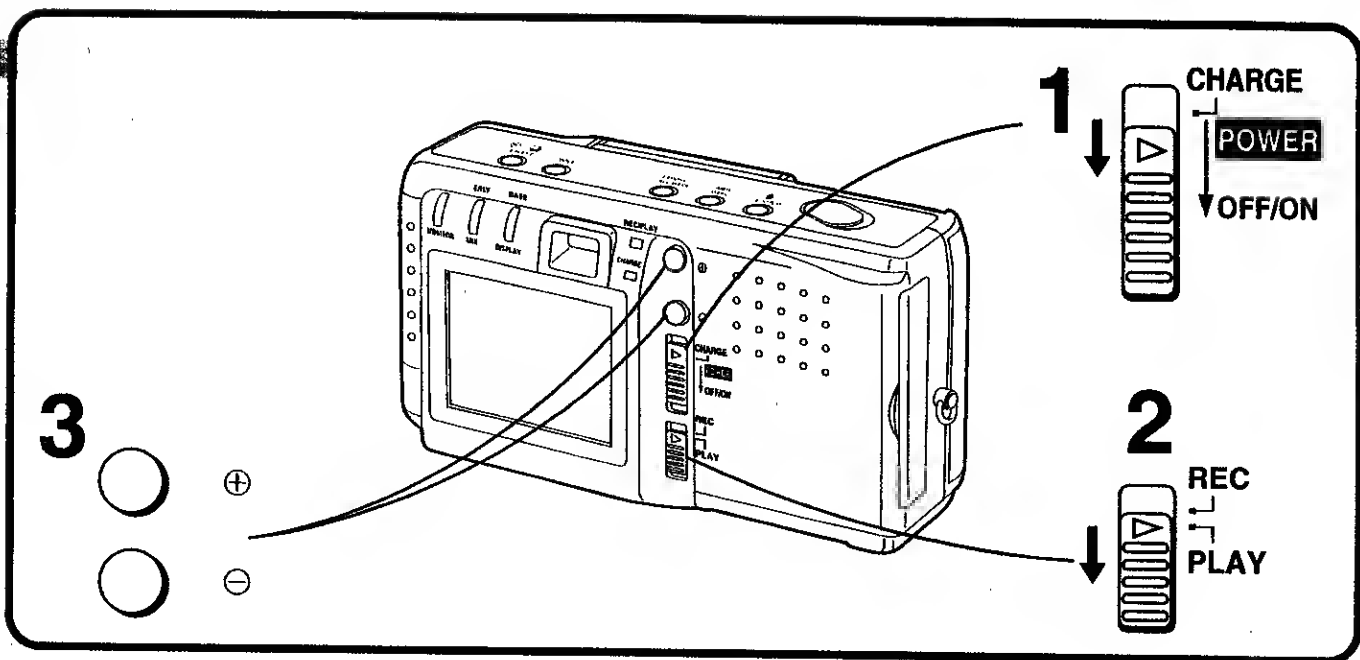
- 2 If you wish to adjust the brightness...**
Hold down the MONITOR Button for at least 1 second.

- 3 Use the \oplus and \ominus Buttons to change the brightness.**
 - \oplus : Each time this button is pressed, the brightness is increased
 - \ominus : Each time this button is pressed, the brightness is decreased.

Adjust the brightness if the surroundings are too bright to see the LCD Screen clearly. The LCD Screen brightness has no relation to the brightness of shot images.

The display is cleared about 10 seconds after the adjustment.

- Even when the LCD Screen has been turned off, it will display just-shot images for about 5 seconds and then turn off again. The LCD Screen will also turn on automatically to display the warning display when the number of frames left to shoot reaches "0" or when the date and time have not been set.
- The settings cannot be changed when the LCD Screen is off.

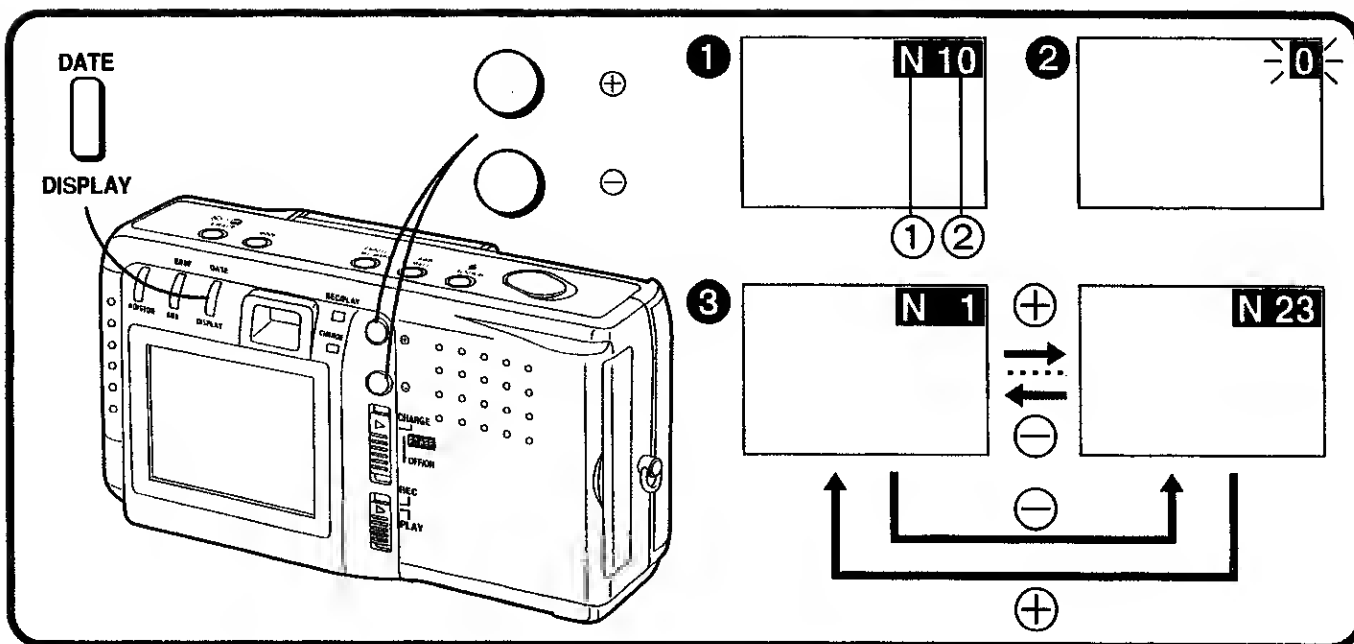


Playback

- 1 Turn on the camera's power.**
The switch automatically returns to its original position.
- 2 Set to the "PLAY" position.**
The REC/PLAY Lamp lights green and the most recently shot image is played back.
- 3 Press the \oplus or \ominus Button.**
 - \oplus : Each time this button is pressed, the images are played back in the forward direction (in the shooting sequence).
 - \ominus : Each time this button is pressed, the images are played back in the reverse direction (in the reverse sequence to actual shooting).

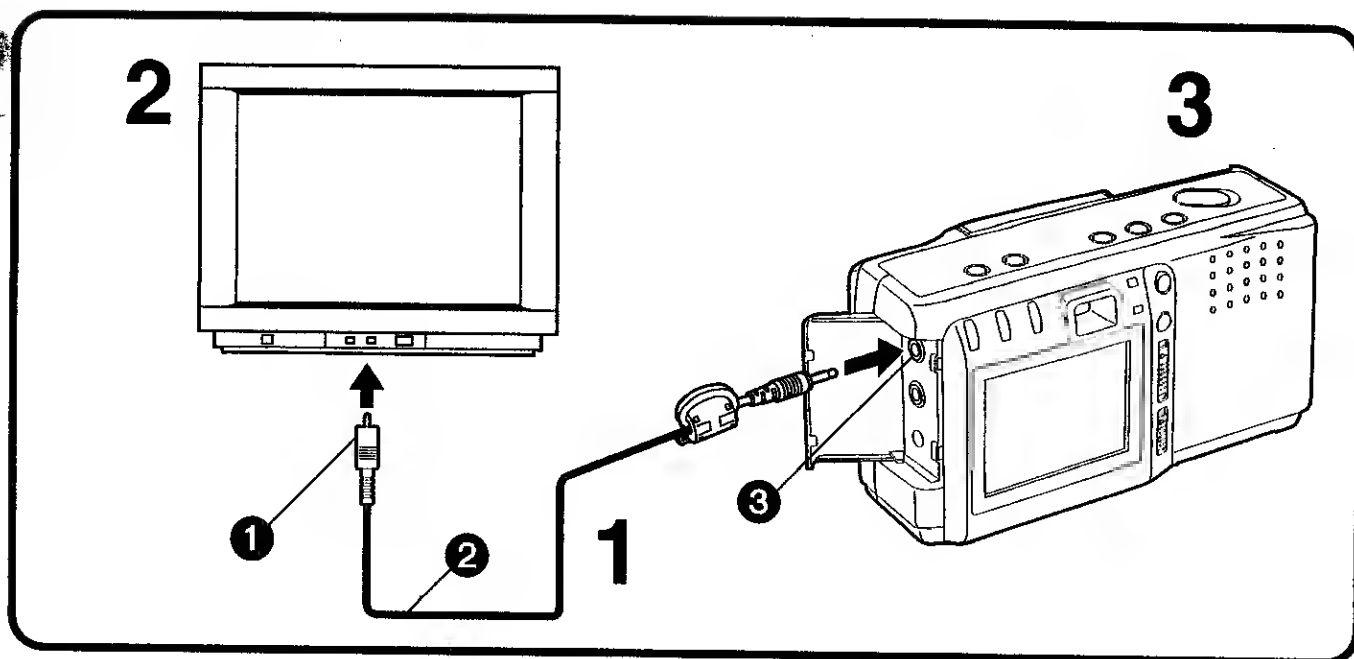
Images can be played back continuously by holding down the button.

- By pressing the \oplus or \ominus Button rapidly, you can change only the playback image number (without playing back each image) and skip directly to the image you wish to see.
- When using battery power, the power will be turned off automatically to save power if no operation is conducted for 2 minutes or so (auto power-off function).
To operate the camera after power has automatically been turned-off, turn the power on again. The power is not turned off automatically when the AC Adaptor is being used.



Displaying the Image Quality Mode/Playback Image Number

- ① Press the DATE/DISPLAY Button repeatedly to turn the displays on and off.
(→ 18)
 - ① Image quality mode
 - ② Playback image number
- ② When no images have been shot, a flashing "0" appears.
- ③ Each time the ⊕ or ⊖ Button is pressed, the playback image number changes as described above. After 999, the playback image number returns to 000, so number 1,000 appears as "000", number 1,001 as "001", and so forth.



Viewing the images on a TV Screen

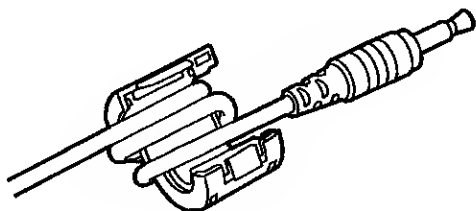
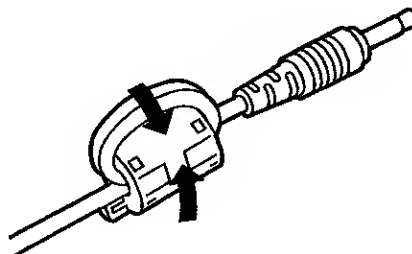
Viewing images on a TV screen is possible only during playback (when the REC/PLAY Switch is in the "PLAY" position).

- 1** Connect the camera to a TV as shown in the figure.
 - ① To VIDEO IN Terminal
 - ② Video Output Cord (supplied)
 - ③ VIDEO OUT Terminal
- 2** Turn on the TV and set the input selector to the "VIDEO" position. (AV1, AV2 etc.)
- 3** Playback on the camera.

- During playback on a TV, the outer portions of images are sometimes omitted.
- The LCD Screen turns off when the Video Output Cord is connected to the VIDEO OUT Terminal (NV-DCF3E/B/A only).
- For the purpose of demonstration, the camera allows you to shoot images and view them on the LCD Screen even when no CF Card is inserted. When using this demonstration mode, do not connect the video output to a television as the resulting picture will be distorted. This is normal and does not represent a malfunction. To use the camera with a TV screen, the CF Card must first be inserted.

Precautions for connecting the Clamp Filter (supplied)

Using the camera near a television or radio may cause reception interference. This is due to the release of unnecessary radio waves. To reduce these unnecessary radio waves, attach the Clamp Filter to the Video Output Cord. (→ 26)

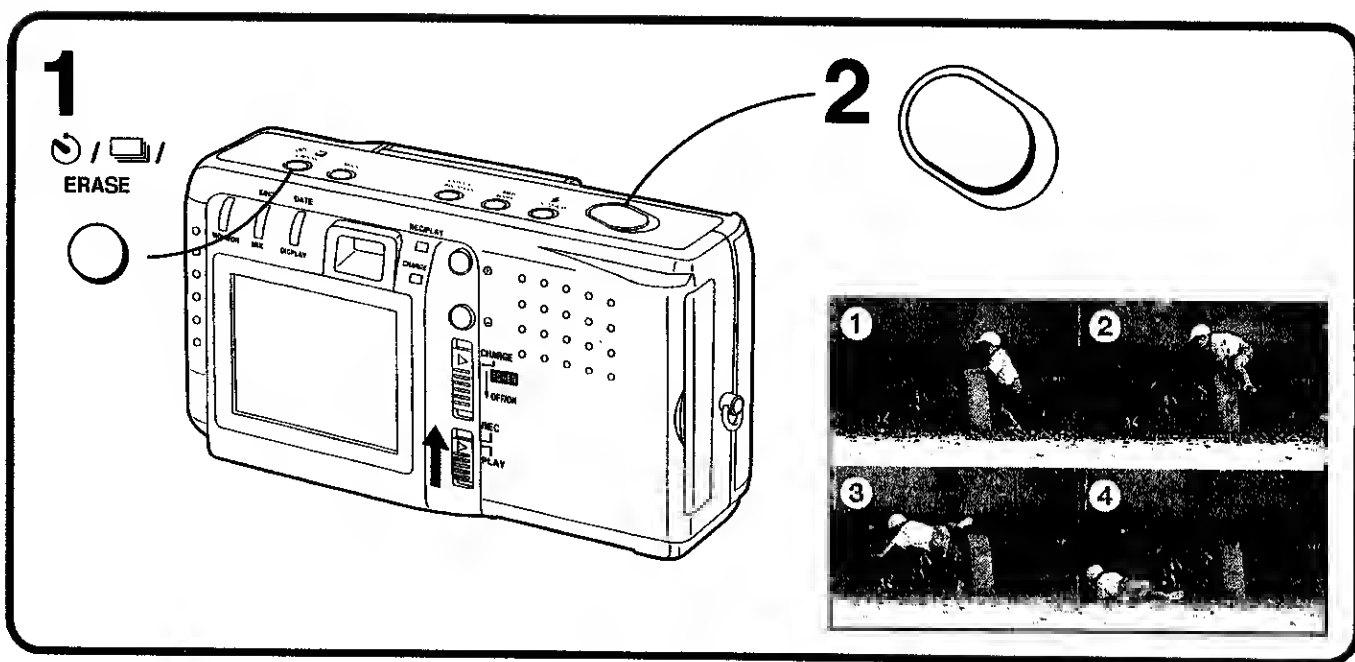
1**2**

Precautions for Connecting the Clamp Filter (supplied)

Using the camera near a television or radio may cause reception interference. To reduce these unnecessary radio waves, attach the Clamp Filter to the video output cord.


- 1** Wrap the cord around the Clamp Filter twice so that the Clamp Filter is as close as possible to the plug.

- 2** Close the Clamp Filter.
When closing, make sure the Clamp Filter does not pinch the cord.



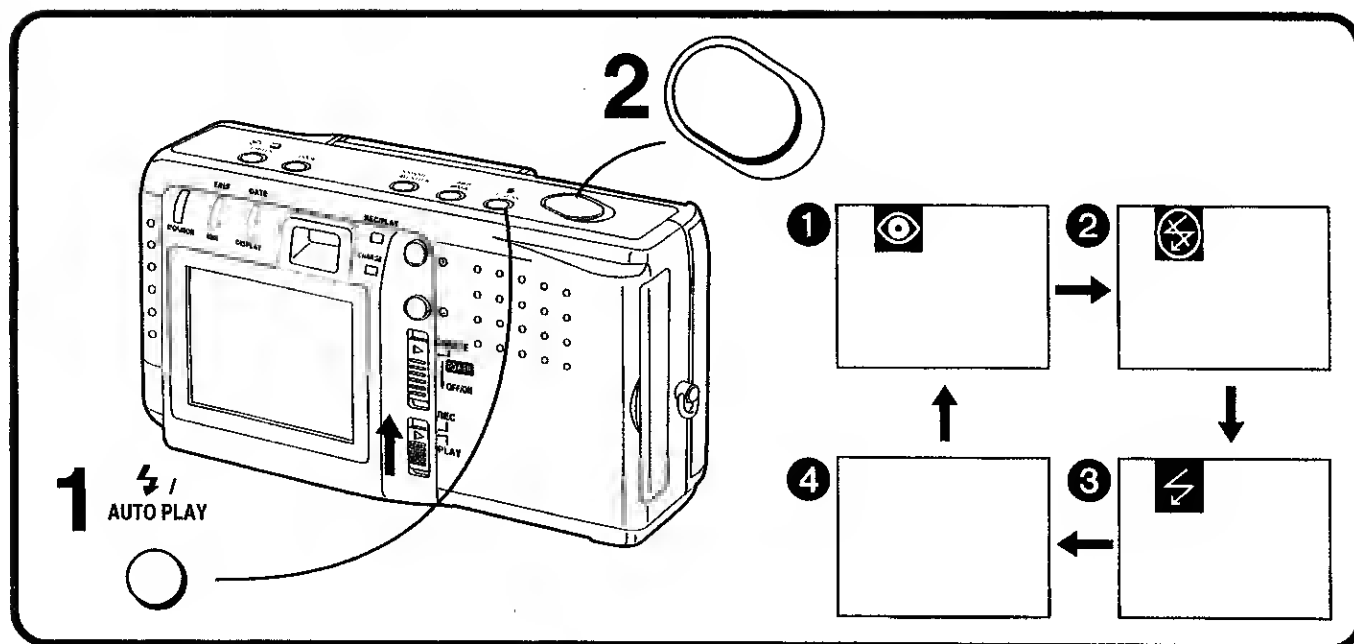
Shooting Consecutive Images of Moving Subjects (Continuous Shooting)

This feature allows you to shoot four frames at 0.3-second intervals. This is useful for shooting fast-moving subjects.

- 1 Press the /ERASE Button twice.**
- 2 Press the SHUTTER Button.**
Four frames are shot consecutively at brief intervals.

Example: Continuously shot images ❶ through ❹ are displayed in order on the LCD Screen.

- It takes about 30 seconds for the images to be recorded.
- Shooting is not possible while the images are being recorded (the REC/PLAY Lamp is flashing).



Using the Flash

Use the flash when shooting in dark locations. Do not block or cover the lens or the Flash Emitter with your fingers. Even covering the Flash Emitter only partially will prevent the full amount of light from reaching the subject.

1 Press the ⚡ / AUTO PLAY Button.
Each time the button is pressed, the flash mode changes in the following order.

- ① Red-eye reduction
- ② No flash
- ③ Always on
- ④ Automatic

2 Press the SHUTTER Button.

- The range of the flash is about 70 cm–3 m.
- Do not block the Light Sensor with your finger or other object. This will prevent proper determination of the brightness.
- In the "Automatic" mode, the "⚡" display will light red to indicate that the flash will light.
- While the flash is recharging, the "⚡" display (or, in the red-eye reduction mode, the "👁" display) flashes. When this happens, wait until the display lights continuously. Shooting is not possible while the display is flashing.

There are four flash modes.

① Red-eye reduction (👁)

This mode reduces the degree to which eyes will appear red in images shot with the flash. This is done by flashing once before shooting and then once more during actual shooting, for a total of two flashes. (In this mode, the Flash Emitter flashes regardless of brightness.)

② No flash (⊗)

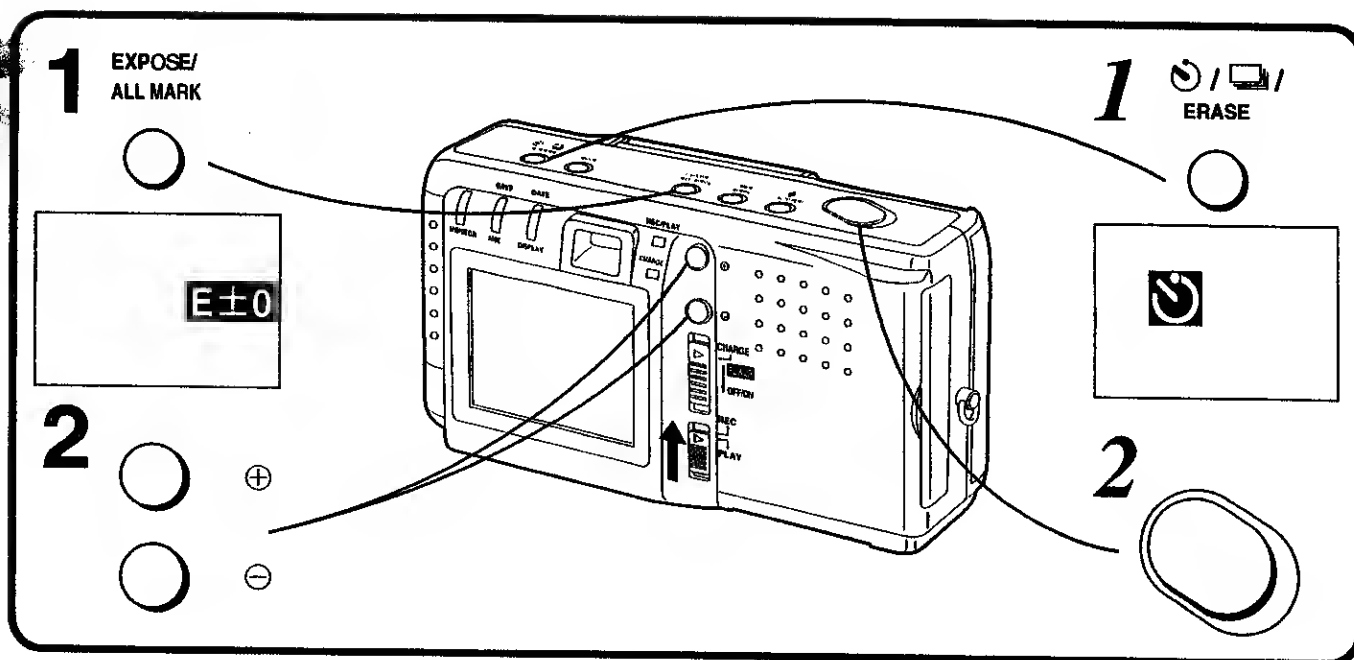
With some indoor lighting, a better image can be shot with the flash turned off.

③ Always on (⚡)

In this mode, the Flash Emitter always flashes, regardless of brightness.

④ Automatic (the "⚡" display lights red when flashing)

The Flash Emitter flashes automatically, according to brightness.



Shooting with the Brightness Compensated (Exposure Compensation)

Normally, exposure is determined automatically. However, when the background is too bright or when shooting in backlit conditions, compensate for the brightness manually.


- 1 Press the EXPOSE/ALL MARK Button.**
The compensation value (E±0) appears.

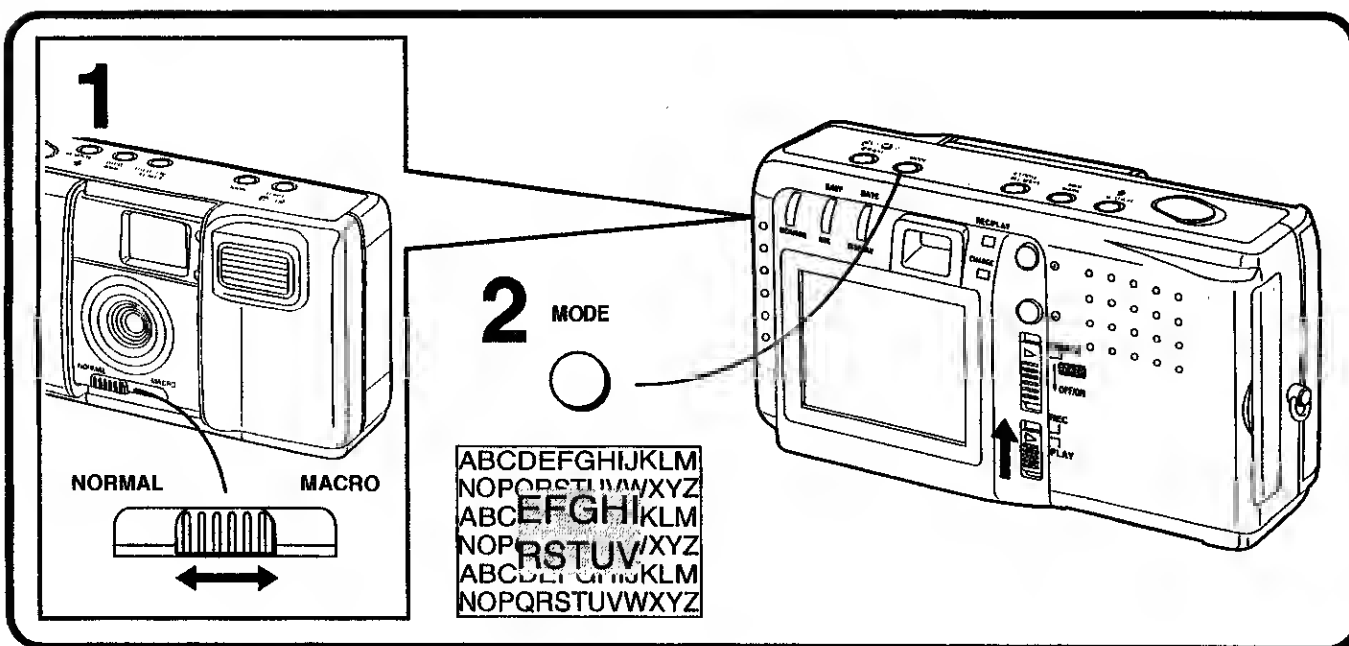
- 2 Press the ⊕ or ⊖ Button while checking the image on the LCD Screen.**
 - ⊕: Each time this button is pressed, the brightness is increased (up to E+4).
 - ⊖: Each time this button is pressed, the brightness is decreased (up to E-4).

- The exposure compensation can be set to any of nine levels of increments of 1/3 EV between E-4 and E+4 ("EV" stands for Exposure Value).
- Shooting with the brightness compensated sometimes causes a blue sky to appear almost white.
- Brightness compensation is not possible during conditions of extreme backlight or extreme darkness.

Using the Self-timer

Use this feature to include yourself in the image you wish to shoot.

- 1 Press the /ERASE Button.**
This sets the camera to the Self-timer mode.
 - 2 Press the SHUTTER Button.**
The Self-timer Lamp begins flashing. About 8 seconds later, the lamp flashes more quickly for 2 seconds, after which the image is shot.
- Place the camera on a tripod or on a stable surface. Only a tripod designed especially for film cameras should be used.
 - The duration of the Self-timer delay cannot be changed.
 - Once the image has been shot, the Self-timer mode is automatically released.



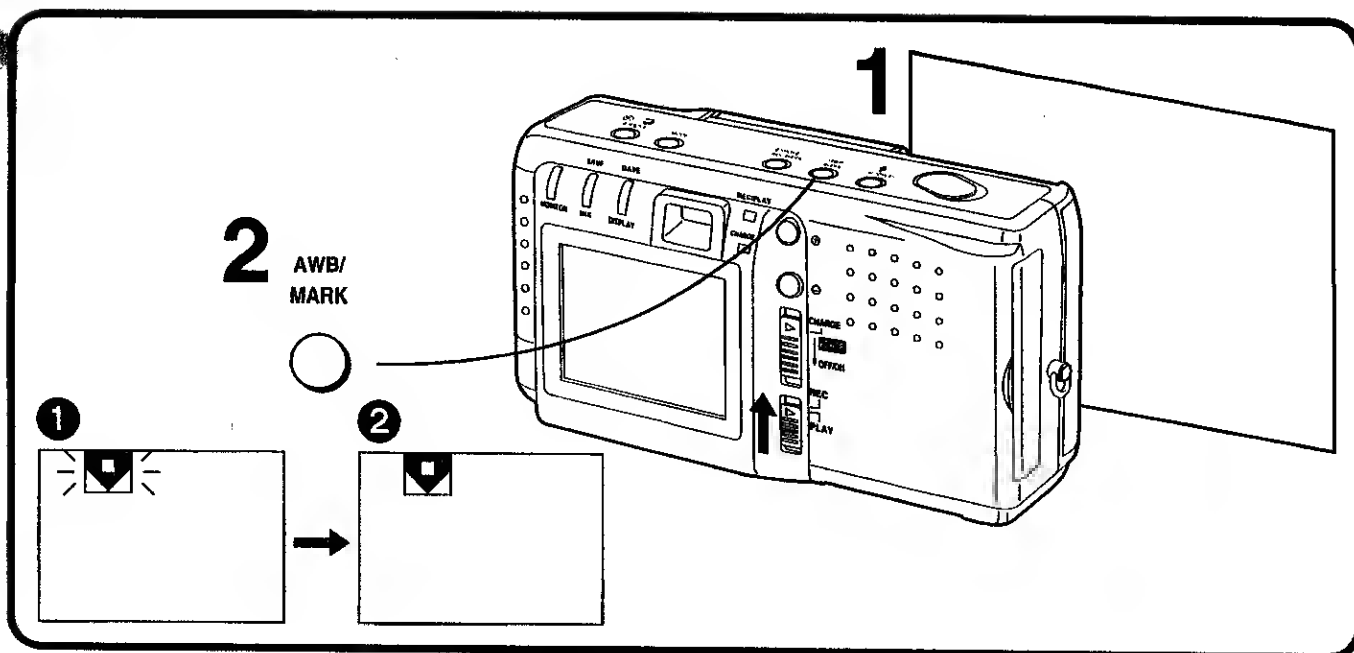
Shooting Enlarged Images (Macro)

With this feature, you can shoot macro (enlarged) images of small plants, insects, photos in albums, etc. The shooting range is about 3 cm–1 m.

- 1** Bring the camera close to the subject while viewing it on the LCD Screen, then move the **NORMAL/MACRO Lever** to bring the subject into focus.
Do not block or cover the lens with your fingers.


- 2** If it is difficult to bring the subject into focus, press the **MODE Button**.
An enlarged image appears in the center of the LCD Screen. Use it to bring the subject into focus (Focus Window).

- To return the camera to its normal state after using the Macro mode, firmly return the **NORMAL/MACRO Lever** to the **"NORMAL"** position and press the **MODE Button** twice.
- The Focus Window (the enlarged image that appears in the center of the LCD Screen) is only used to make focusing easier. It does not mean that only the image inside the Focus Window will be shot.
- The flash should be set to the **"No flash"** mode because of the short distance to the subject.



Shooting with the White Balance Adjusted Manually

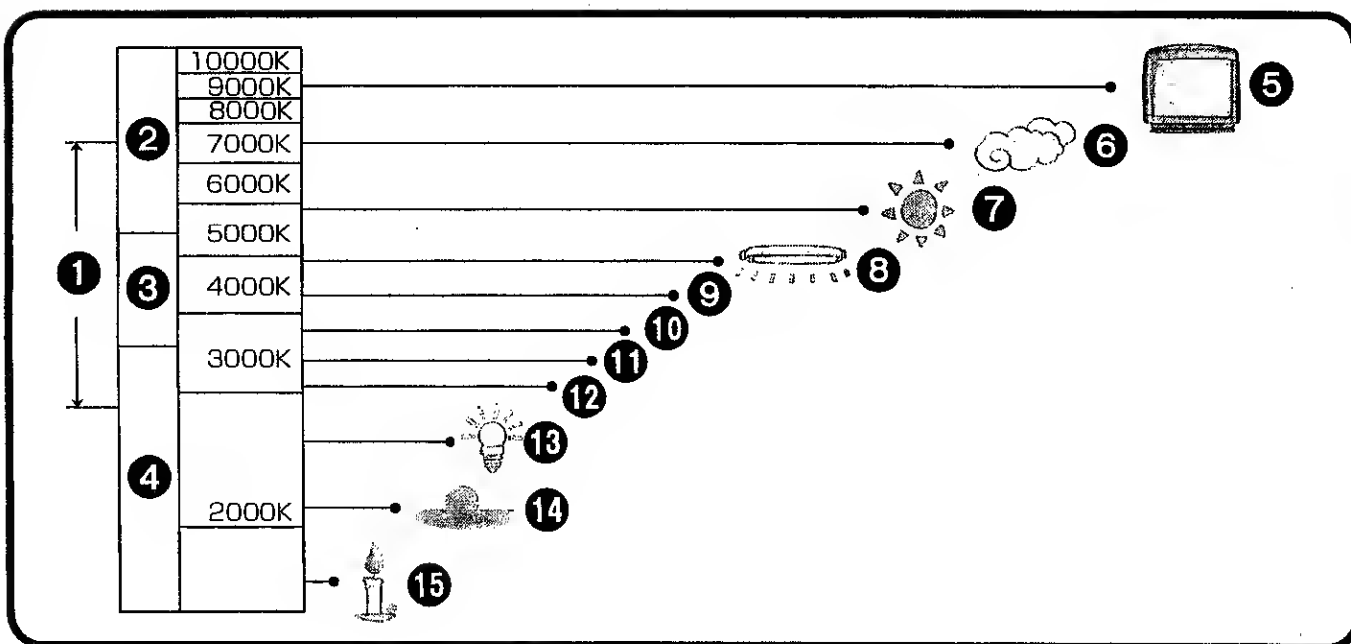
Normally, the white balance is adjusted automatically to create a natural colour balance (tint). Adjust the white balance manually if the automatic colour balance is not to your liking.

- 1** Train the camera on a white card or white piece of paper so that it fills up the entire frame.
- 2** Hold down the AWB/MARK Button until the “” marking flashes once.
 - 1** Adjusting white balance
(lights continuously then flashes once)
 - 2** Adjustment complete
(lights continuously)

- In dark surroundings, the proper balance is sometimes difficult to achieve manually. If this is the case, shoot with the automatic mode.
- The settings made in the manual mode are retained in the memory when the camera's power is turned off.

To Return the Camera to the Automatic Setting

Press the AWB/MARK Button so that the “” display is cleared.

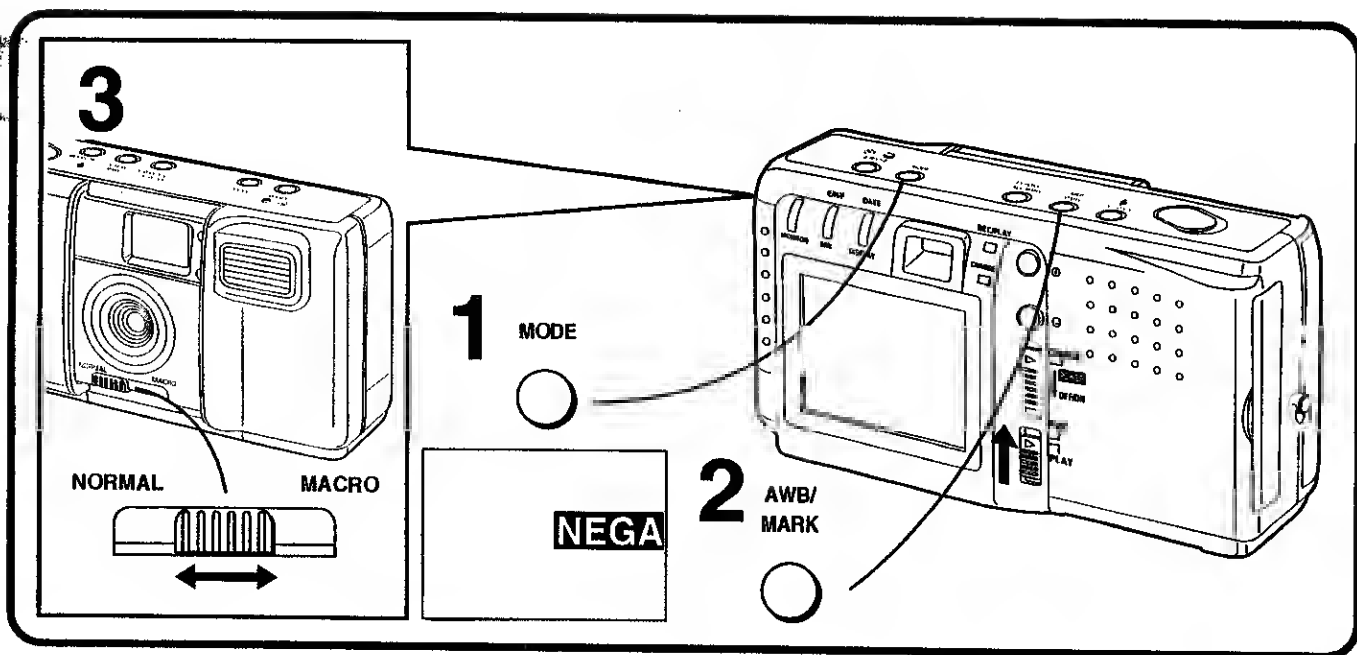


White Balance

White balancing means setting the colour balance so that objects whose colour is pure white will appear pure white in any light source. By telling the camera which colour is white in sunlight or fluorescent light, for instance, the correct colour balance is achieved for all other colours.

Since white is the standard for determining all other colours, white-balancing the camera with pure white will create a natural colour balance in shot images.

- ① Control range for auto white balance
- ② Bluish color
- ③ Whitish color
- ④ Reddish color
- ⑤ TV screen
- ⑥ Cloudy sky
- ⑦ Sunlight
- ⑧ White fluorescent lamp
- ⑨ Two hours before sunset or after sunrise
- ⑩ One hour before sunset or after sunrise
- ⑪ Halogen light bulb
- ⑫ 30 minutes before sunset or after sunrise
- ⑬ Incandescent light bulb
- ⑭ Sunset or sunrise
- ⑮ Candlelight

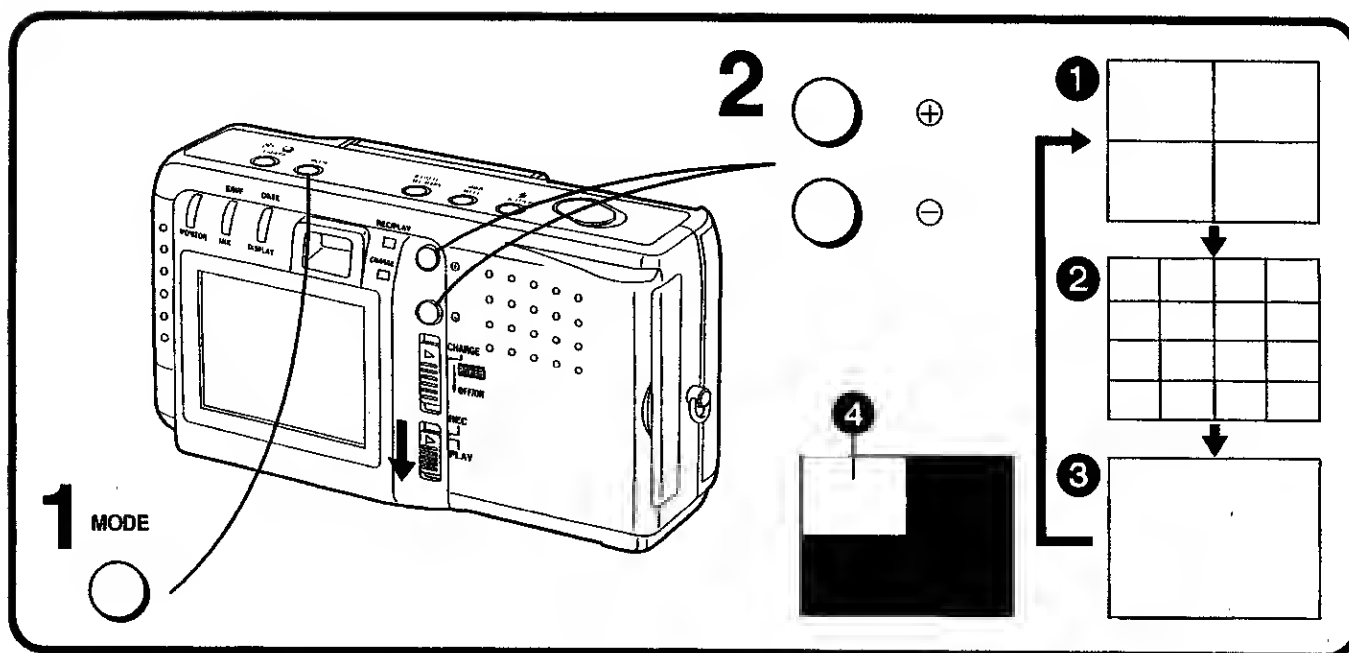


Viewing Photographic Negatives as Positives (Negative/Positive Reversal)

This feature allows you to shoot an ordinary photographic negative and view it as an ordinary positive photograph. A negative viewer (not supplied) is required.

- 1 Press the MODE Button twice.**
The "NEGA" display appears.
- 2 Train the camera on a blank area of the negative film so that it fills up the entire frame, then hold down the AWB/MARK Button until the "■" display flashes once.**
- 3 Move the NORMAL/MACRO Lever to focus.**

- Press the MODE Button again to return to normal positive display (the "NEGA" display is cleared).
- When the power is turned off, the camera returns to normal positive display.
- Because of the simplified signal processing in the negative display mode, some images may not display clearly.



Viewing Multiple Images at the Same Time (Multi-Frame Playback)

Four or 16 shot images can be simultaneously displayed on the LCD Screen in sequence. This is useful for reviewing the images you have shot.

1 Press the **MODE** Button.

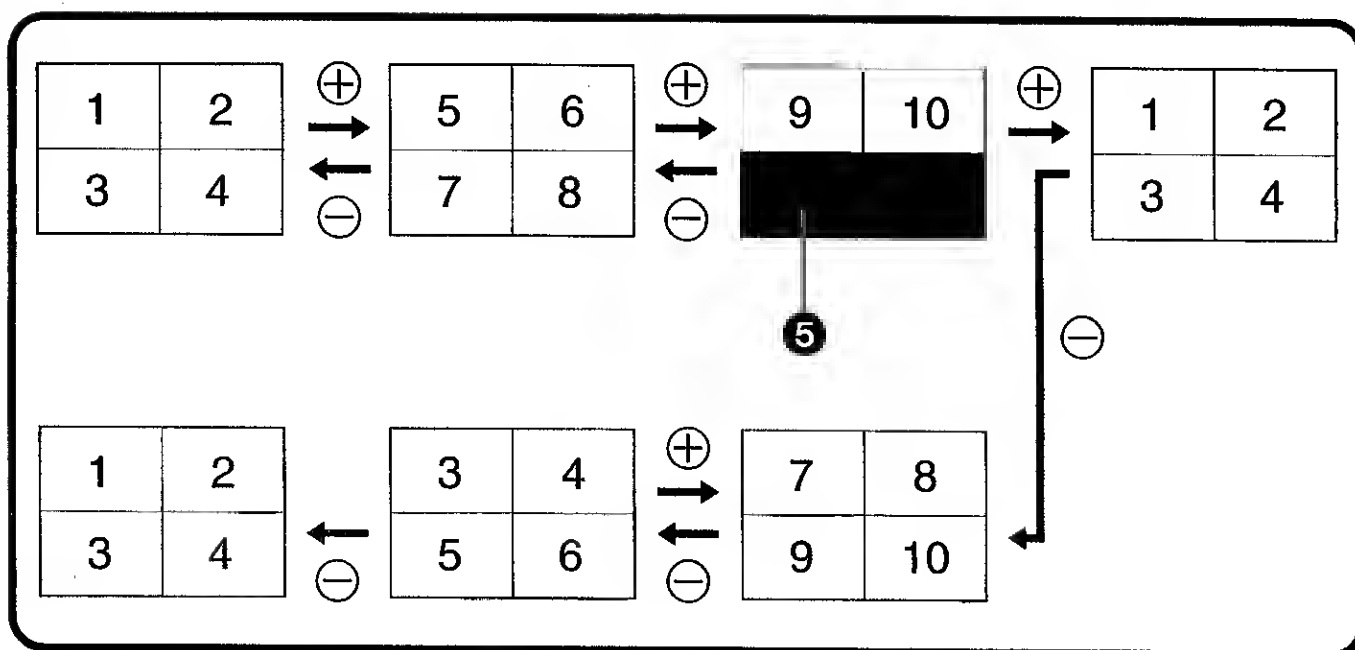
Each time the button is pressed, the display changes as shown in the above figure.

- ① 4 frames
- ② 16 frames
- ③ Single frame (normal display)

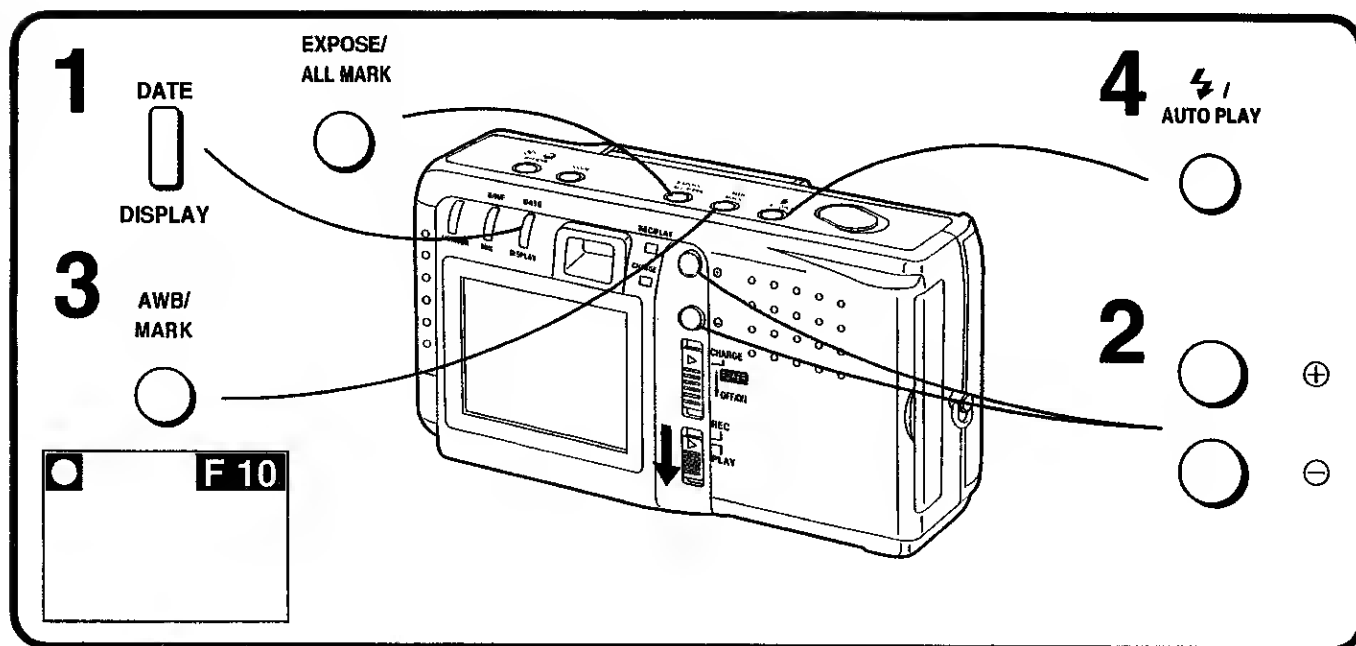
2 Press the **⊕** or **⊖** Button as desired.

- When multi-frame playback is started during normal playback, the image being viewed when the **MODE** Button was pressed appears in the upper left-hand corner, and the subsequent images appear after it in sequence.
- When multi-frame playback is begun immediately after shooting by moving the **REC/PLAY** Switch to the "PLAY" position, only the image shot last appears (in the upper left-hand corner). The remaining portion of the screen is blacked out (④). When this happens, press the **⊕** or **⊖** Button to play back the subsequent images as shown on the following page.

- The year and date do not appear during 4-frame and 16-frame display.
- The top and bottom edges of images are sometimes omitted.
- The speed at which images appear sometimes varies according to image quality.



Each time the ⊕ or ⊖ Button is pressed, the display changes as shown in the above figure.
 Example: When using a 4-frame display to play back 10 shot images (numerals indicate playback image numbers). Sections with no images to display are black (⊗).



Automatic Continuous Playback

Selected images are played back automatically one after the other at 7-second (NV-DCF3E/B/A), 5-second (NV-DCF3PM) intervals, without having to press the \oplus or \ominus Button each time. It is also possible to play back all images automatically.

1 Press the DATE/DISPLAY Button repeatedly until the image quality mode display and a playback image number appear.

2 Use the \oplus and \ominus Buttons to display an image you wish to select for automatic playback.

3 Press the AWB/MARK Button.

- The "O" mark appears on the image. Pressing the button again clears the mark.
- To select multiple images, repeat steps 2 and 3.
- Steps 1–3 are not necessary when playing back all images automatically.

4 Press the ⚡ /AUTO PLAY Button. Automatic playback of the selected images begins.

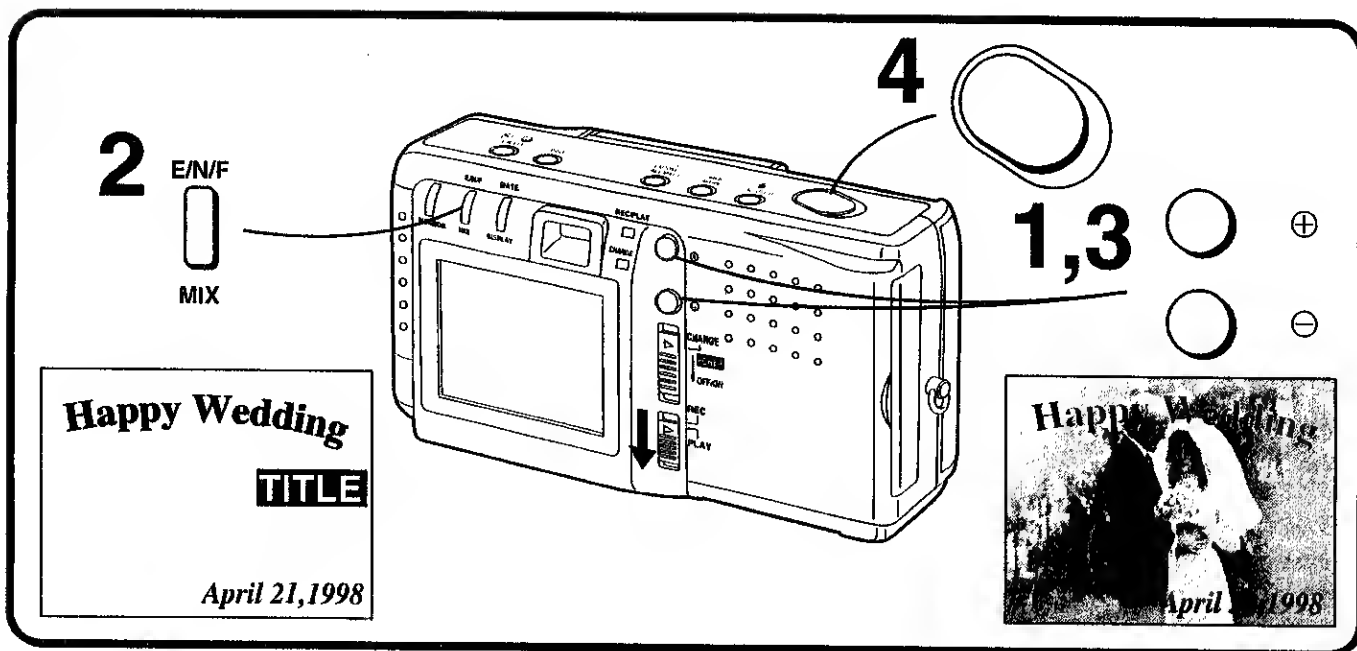
- Images are automatically played back in the same sequence in which they were marked with the "O" mark. If all images were marked by pressing the EXPOSE/ALL MARK Button, the images are automatically played back in the same sequence as the playback image numbers.
- During automatic playback, the "O" mark on the images lights up red.
- During automatic continuous playback, one screen is slowly replaced by the next screen starting from the top.
- Automatic playback repeats until the ⚡ /AUTO PLAY Button is pressed again.

To Stop Automatic Continuous Playback

Press the ⚡ /AUTO PLAY Button.

To Clear the "O" mark from All Marked Images

Select any image that has the "O" mark and hold down the EXPOSE/ALL MARK Button for at least one second. Pressing the button again will mark all images with the "O" mark, indicating that all images are selected.



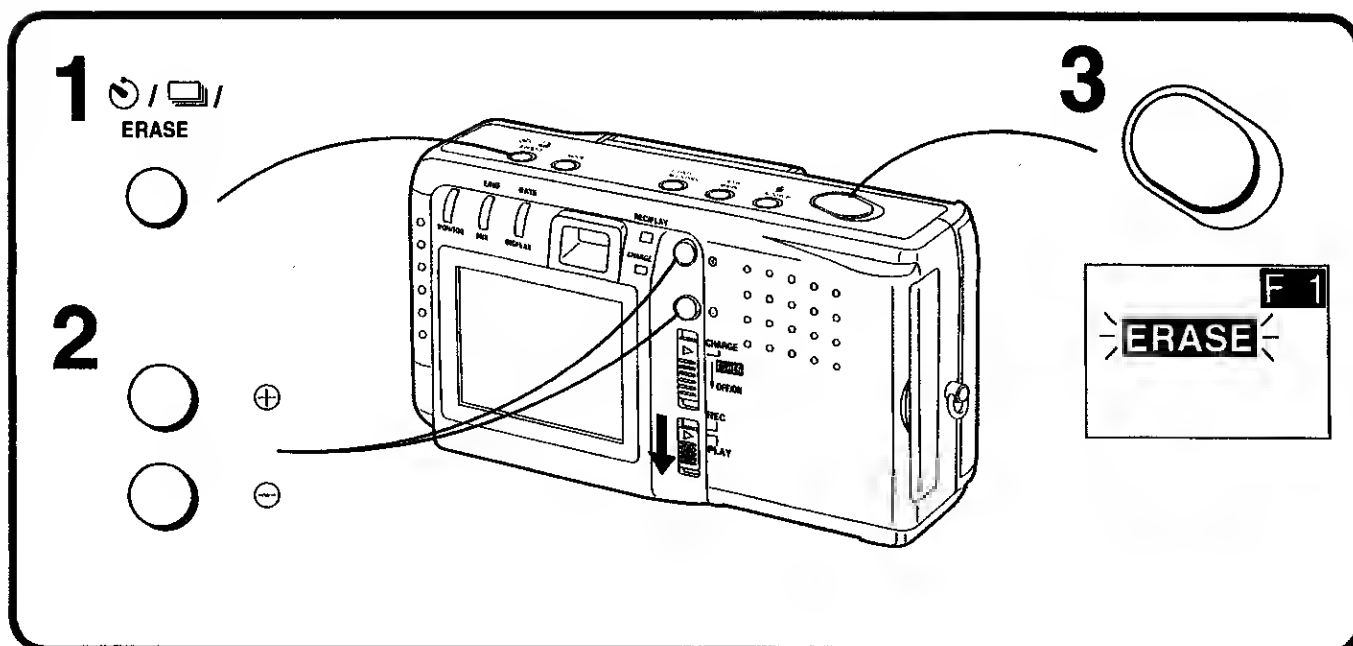
Adding Titles

A title can be added to a shot image to create a single image.

The title to be added should be written in dark letters on white paper and shot before proceeding.

- 1 Press the \oplus or \ominus Button to select the title image you have shot.**
- 2 Press the E/N/F/MIX Button.**
The letters' white background is omitted.
- 3 Press the \oplus or \ominus Button to select the image to which the title is to be added.**
The two images are now combined.
- 4 Once you have found the image to which the title is to be added, press the SHUTTER Button.**
 - The mixed image is recorded to the CF card.
 - The mixed image will not be recorded if the CF card is full.

- After mixing, the two pre-mixed images remain intact. The mixed image is recorded as a separate image, and is given the Image playback number that comes after the last number prior to mixing.
- Adding titles is not possible when the Video Output Cord is connected to the VIDEO OUT Terminal. (NV-DCF3E/B/A only)
- After step 3, the mixed image can be printed out without pressing the SHUTTER Button (only when the VIDEO OUT Terminal is used). In addition, unwanted displays such as the image quality mode, playback image number and date/time can be cleared by pressing the DATE/DISPLAY Button until the unwanted display is cleared. (NV-DCF3PM only) (→ 18)
- Letters written with light colours (such as yellow) may appear faint or not appear at all. To avoid this, write letters using dark colours like red, black or dark blue.



Deleting the Images You Have Shot (One at a Time)

You can check out each image to decide whether or not to delete it.

※ Once an image has been deleted, it cannot be regenerated. Make sure that you want to delete the image before doing so.

• During deleting (when the “ERASE” or “ALL ERASE” display is flashing), do not disconnect the AC Adaptor or remove the batteries. Doing so will damage the CF card's format and make it unusable.

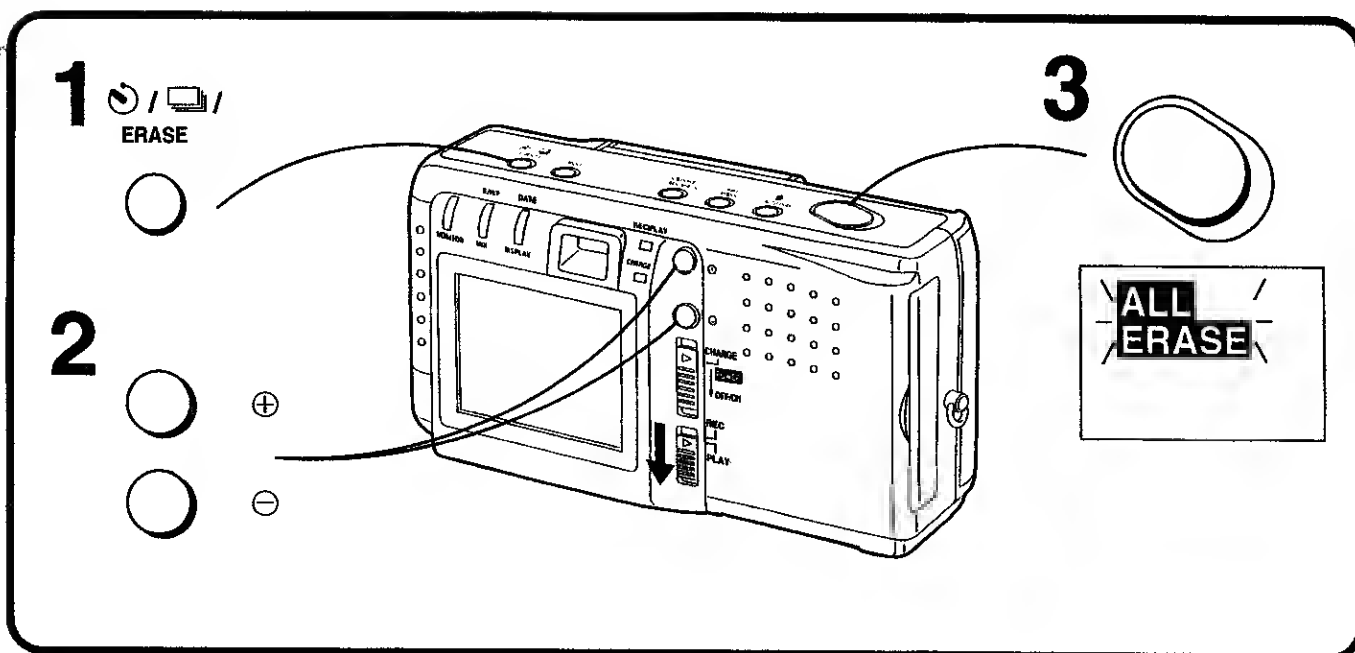
- 1** Press the /ERASE Button.
- 2** Press the \oplus or \ominus Button to select the image which is to be deleted.
- 3** Hold down the SHUTTER Button for at least one second.

It takes from 1 to 3 seconds or so to delete an image. (The “ERASE” display flashes during deleting.) After one image has been deleted, the next shot image appears. The playback image number is decremented each time.

When Continuing to Delete Other Images

Repeat steps 2 and 3 described above.

- When you are finished deleting, press the /ERASE Button twice to release the delete mode.
- When there are no more images to delete (the “0” display begins flashing), the delete mode is automatically released.



Deleting All the Images You Have Shot

All the images shot can be deleted in one go.

※Performing this operation will delete all the images shot and they cannot be regenerated. Make quite sure that you want to delete all the Images before deleting them.

1 Press the /ERASE Button twice.

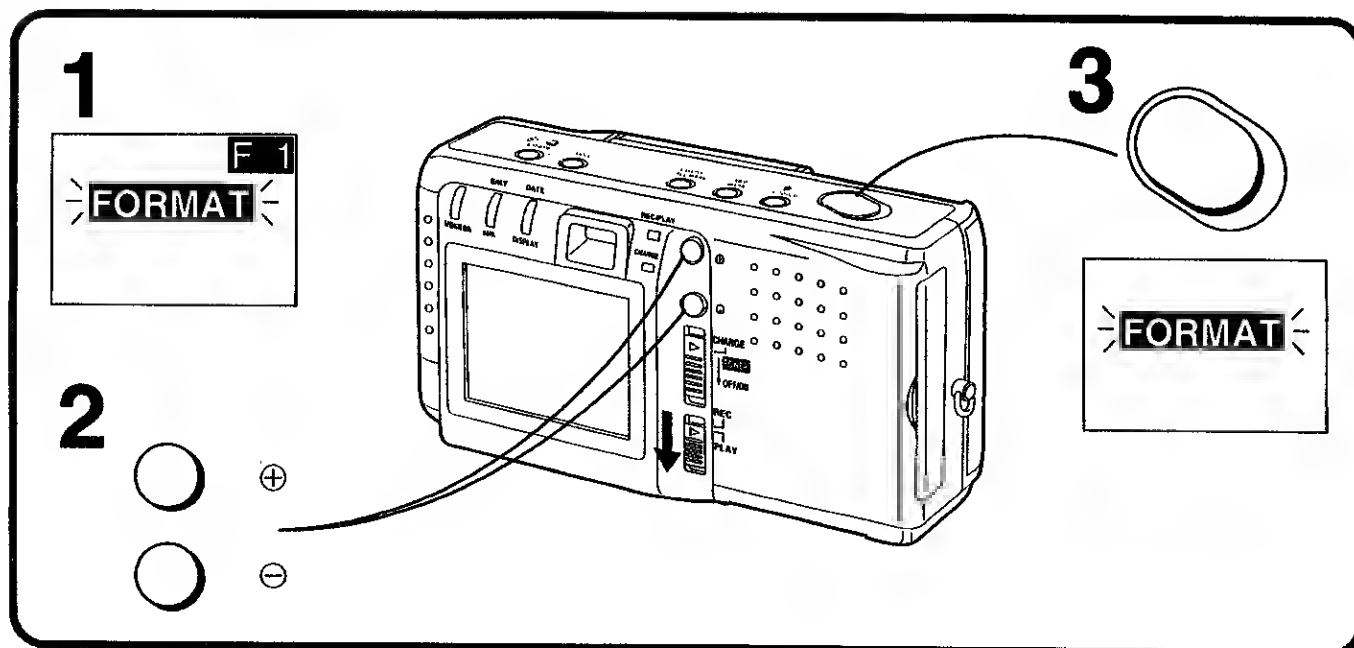
2 With the  and  Buttons held down simultaneously...

3 Hold down the SHUTTER Button for at least 1 second.

It takes about 5 seconds to delete all the images on the supplied CF card (2 MB), although this will depend on the nature of the images shot. (During deleting the "ALL ERASE" display flashes.) After deleting, the playback image number on the LCD Screen changes to "0" and begins flashing.

- If the batteries run down during deleting, the camera's power will automatically turn off, and some of the images may remain in the camera without being deleted. When this happens, insert fresh dry batteries or charged Ni-Cd batteries and repeat the deleting process.
- Images and files recorded on a CF card with a different type of camera or a personal computer cannot be deleted. When such files are present, the number of frames which can be shot is reduced.

- When deleting is completed (when the "0" begins flashing), the delete mode is automatically released.



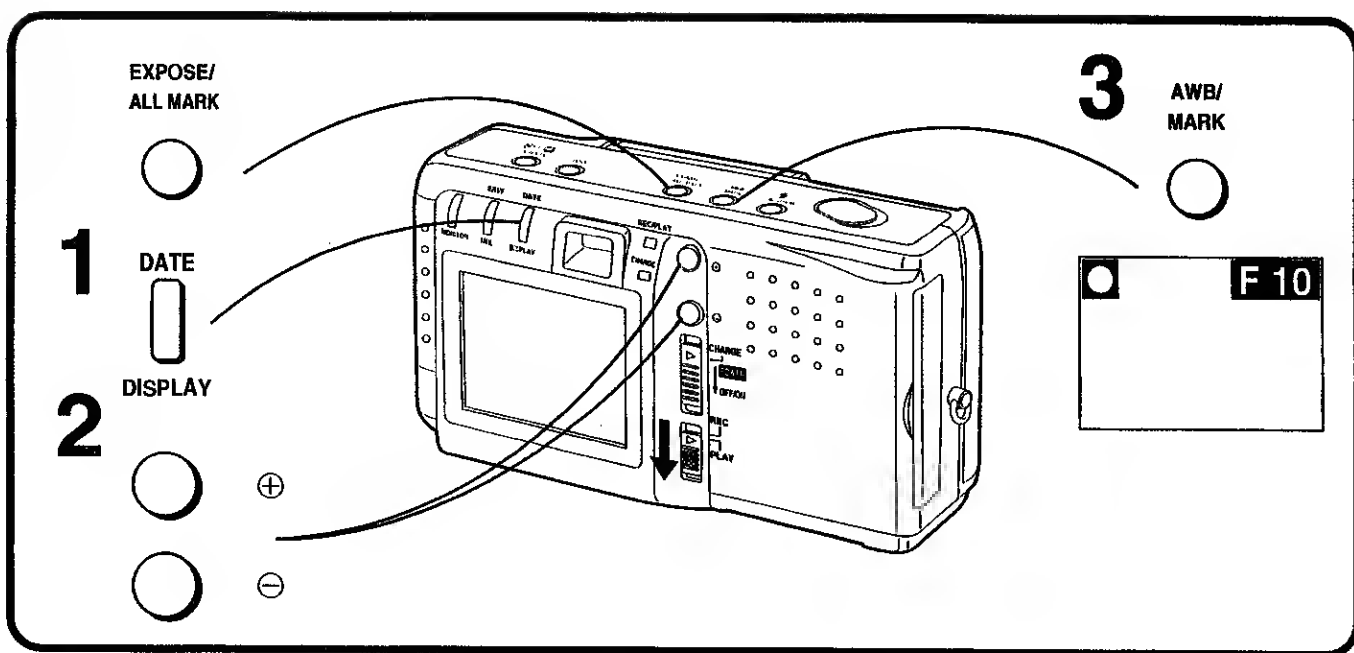
Formatting a CF Card (CF Card Formatting)

The "FORMAT" display appears on the LCD Screen when the CF card inserted cannot be used in its present state. When this happens, format the CF card.

※ Performing this operation will delete all the images recorded and they cannot be regenerated. Make quite sure that you want to delete all the images before formatting.

- 1** If the "FORMAT" displays flashes when a CF card is inserted...
- 2** Press the \oplus and \ominus Buttons simultaneously and hold them down.
- 3** Hold down the SHUTTER Button for at least one second.
With the supplied CF card (2 MB), it takes about 2 seconds to format.

- The supplied CF card has already been formatted and does not require this operation.
- When formatting has been completed, the format mode is automatically released.
- If the batteries run down during formatting, the camera's power will automatically turn off, and the CF card will not be completely formatted. When this happens, insert fresh dry batteries or charged Ni-Cd batteries and repeat the formatting process.



Using the Camera to Select Images to be Printed (Printer Connection)

The camera can be used to select images to be printed out on a printer. Multiple images can also be printed out in one go. Printing with this feature requires the Digital Video Printer NV-MPD1 (sold separately) (as of April 1998).

- 1** Press the **DATE/DISPLAY** Button repeatedly until the image quality mode and the playback image number appear.
- 2** Use the **+** and **-** Buttons to select the image you wish to print.
- 3** Press the **AWB/MARK** Button.
 - The "O" mark appears on the image. Pressing the button again clears the mark.
 - To select multiple images, repeat steps 2 and 3.
- 4** Remove the CF card from the camera, insert it into the PCMCIA Adaptor (supplied) and insert it to the printer. (→ 42)
- 5** Perform printing operations on the printer. (→ 42)

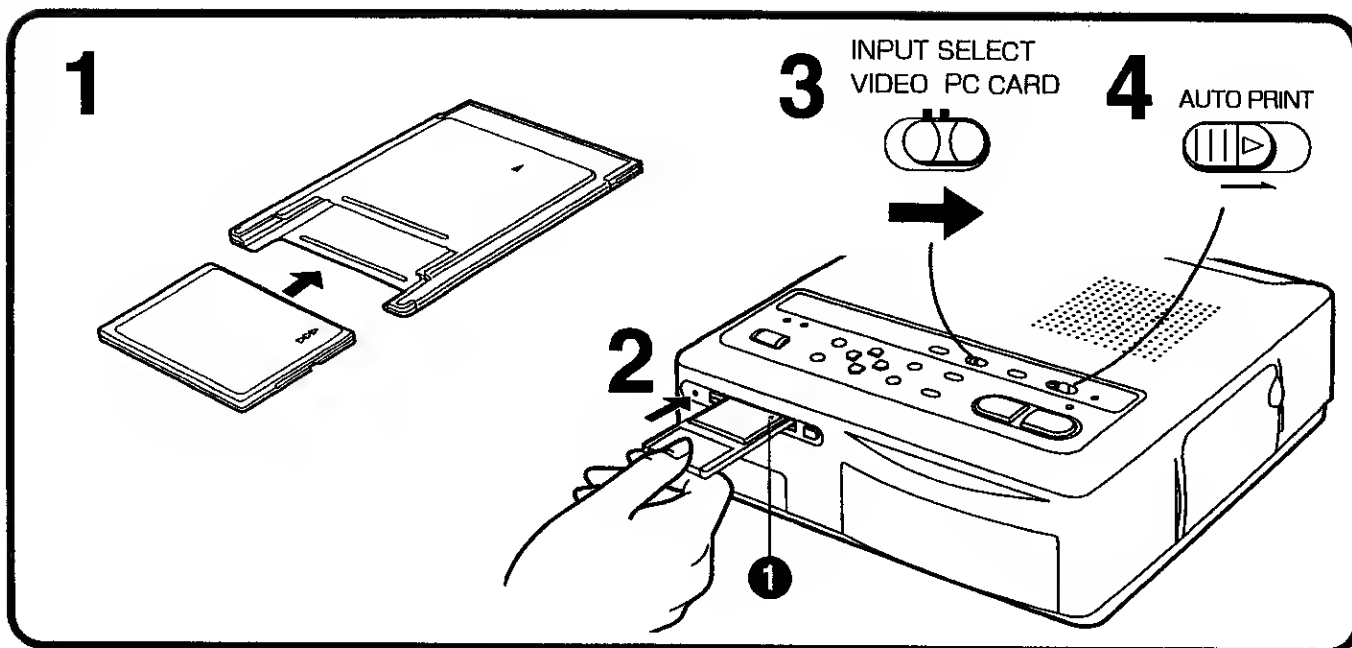
To Print All Images

Select any image that does not have the "O" mark and hold down the **EXPOSE/ALL MARK** Button for at least one second.

- All images are now marked with the "O" mark.

To Clear All "O" marks

Select any image that has the "O" mark and hold down the **EXPOSE/ALL MARK** Button for at least one second.



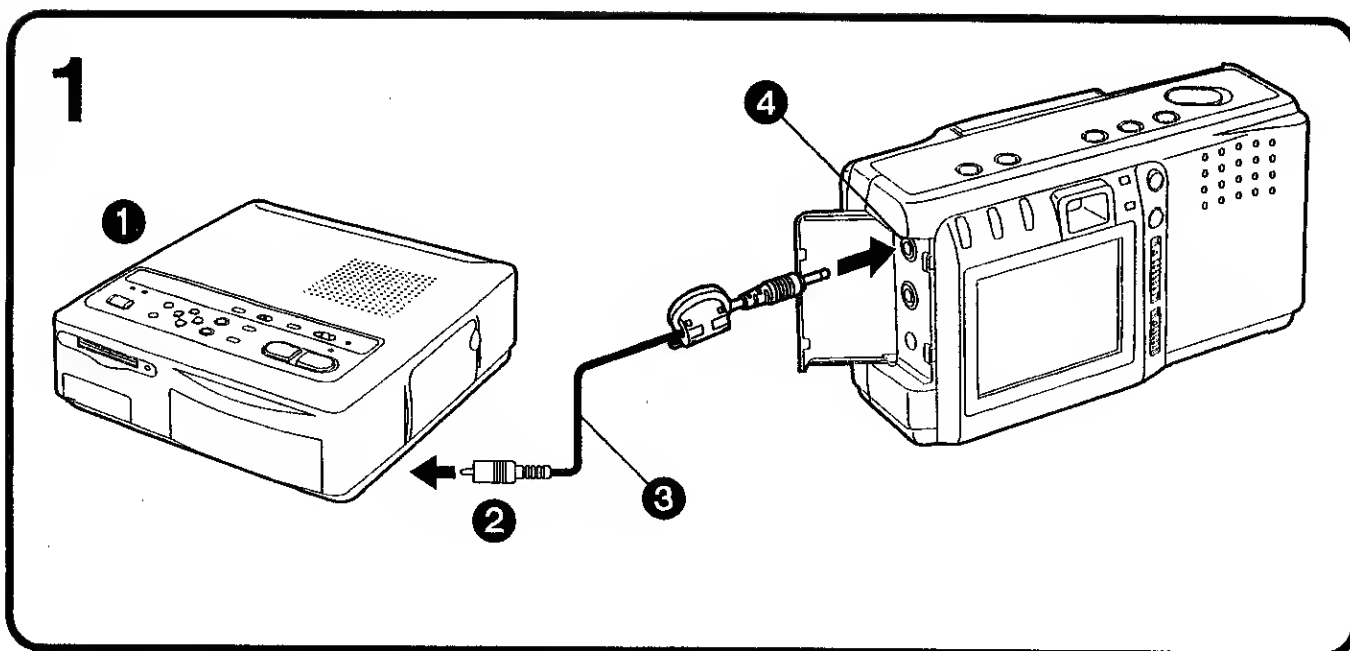
Printing on a Video Printer

■ Printing directly from a CF card

Printing shot images directly from a CF card requires the Digital Video Printer NV-MPD1 (sold separately) (as of April 1998). For the detailed operating procedure, refer to the Digital Video Printer's operating instructions.

- 1 Insert the CF card containing the shot images into the PCMCIA Adaptor (supplied).**
- 2 Insert into the printer.**
Insert the adaptor in the direction of the "▲" mark ❶ as shown in the figure. Insert the adaptor as far as it will go.
- 3 Turn on the printer and set the INPUT SELECT (VIDEO/PC CARD) Switch to the "PC CARD" position.**
Reading of the CF card begins (indicated by the lighting of the printer's ACCESS Lamp).
- 4 Slide the AUTO PRINT Lever.**
Printing begins with the image marked with the "O" mark as described on the previous page.

- The Digital Video Printer NV-MPD1 has many useful features, such as ALBUM PRINT (printing 4 to 16 different images on a single piece of paper) and MULTI FRAME PRINT (printing the same image in 4 to 16 frames on a single piece of paper). For details, refer to the printer's operating instructions.
- Moving the AUTO PRINT Lever during reading of the CF card (while the ACCESS Lamp is lit) may prevent proper printing of the images marked with the "O" mark. Wait until the ACCESS Lamp turns off before moving the AUTO PRINT Lever.



■ Using the VIDEO OUT Terminal

1 Connect as shown in the above figure.

- ① Video Printer (sold separately)
- ② To VIDEO IN Terminal
- ③ Video Output Cord (supplied)
- ④ VIDEO OUT Terminal

2 Play back the image on the camera and perform printing operations.

- For the detailed operating procedure, refer to the Video Printer's operating instructions.
- When using the Digital Video Printer NV-MPD1 (sold separately), images can be printed either by using a CF card as explained on the previous page, or by following this procedure. However, because this procedure uses video input, printer connection (→ 41) is not possible.

Operating Environment **(for Windows 95)**

It is possible to install on Microsoft Windows 95 (hereinafter simply "Windows 95").

Requirements:

80486 CPU or higher

PC/AT personal computer running Windows 95

Graphic display:

True Colour (approx. 16.7 million colours) is recommended (can also operate with 256 colours).

Available RAM:

- 16 MB or more (Driver software)
- 8 MB or more (PhotoEnhancer)

Available hard disk space:

- 50 MB or more (Driver software)
- 22 MB or more (PhotoEnhancer)

Disk drive:

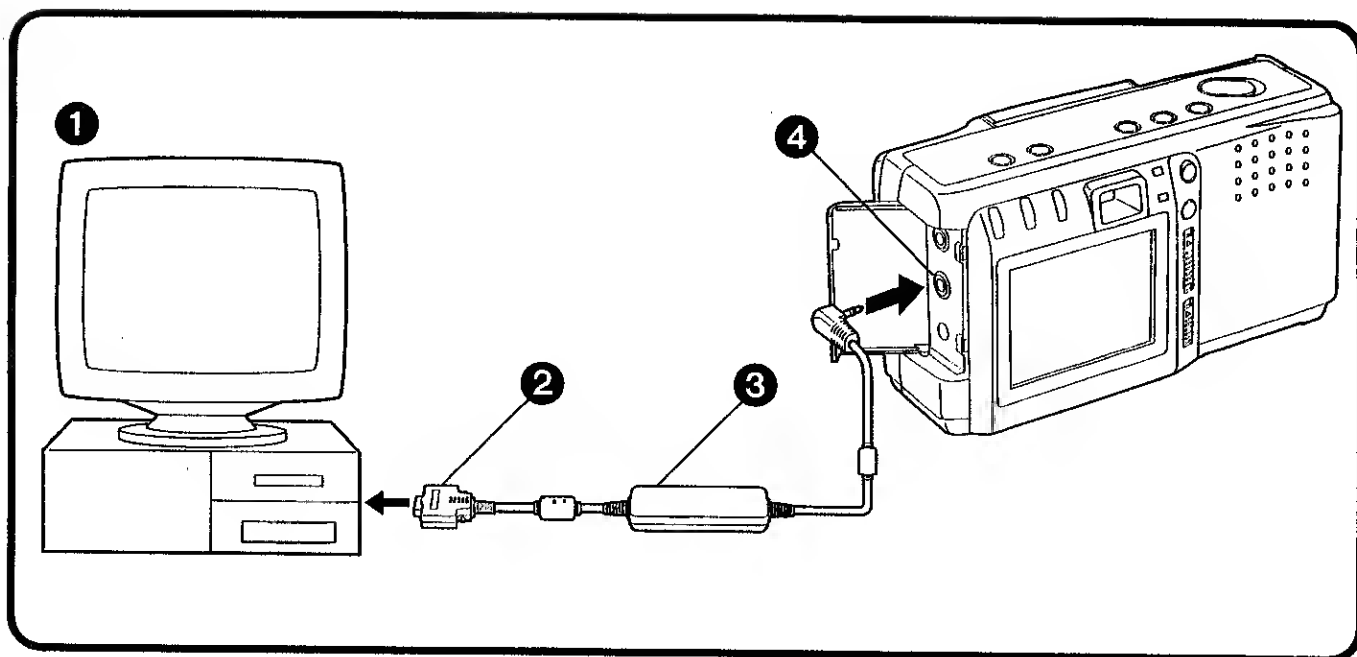
CD-ROM drive

Connector:

RS232C port, D-sub 9-pin

Other:

Mouse



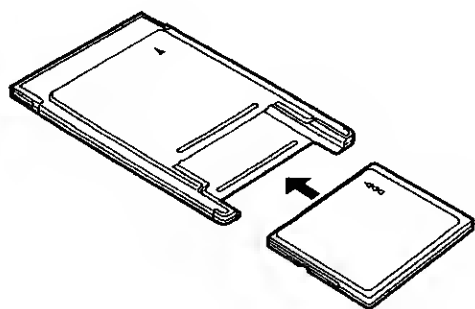
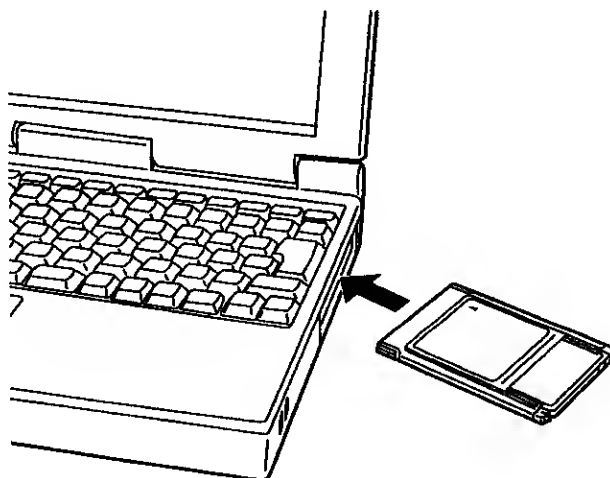
Connections

For a PC/AT computer with a D-sub 9-pin RS-232C connector, simply plug in the Interface Adaptor (supplied) as it is.

- ❶ Personal computer (sold separately)
- ❷ To RS-232C port
- ❸ Interface Adaptor (supplied)
- ❹ DIGITAL IN/OUT Terminal

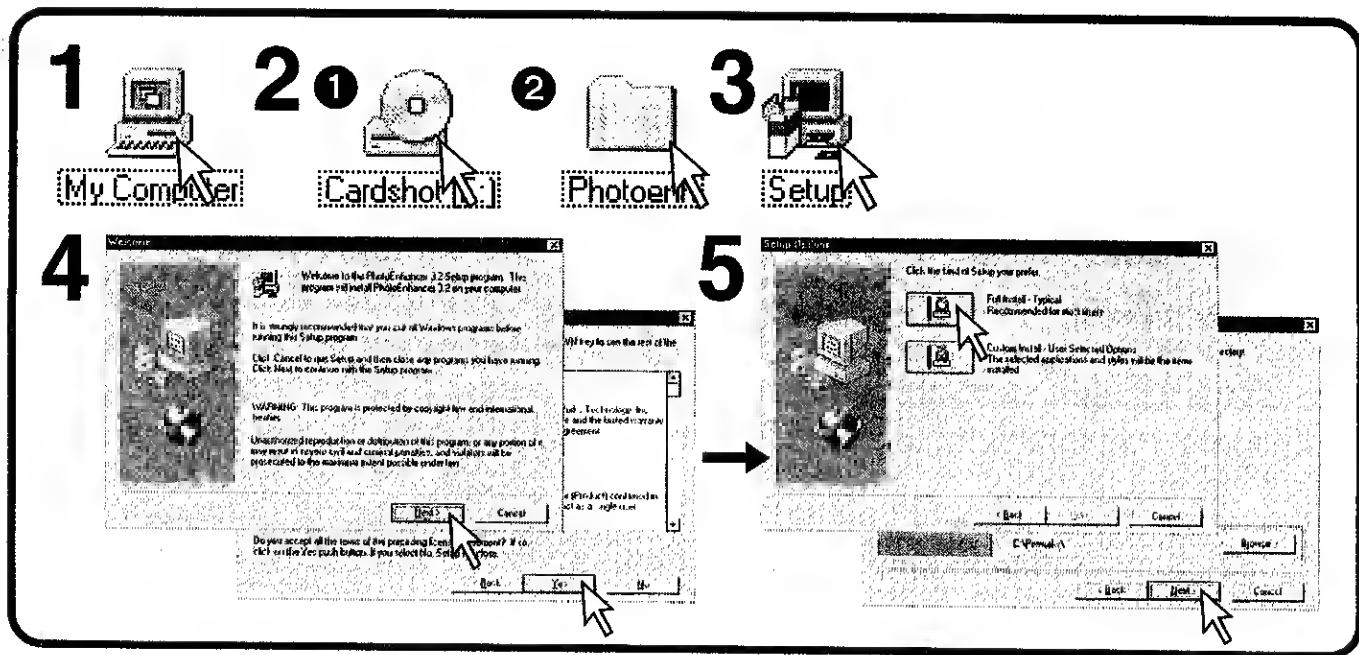
- Before connecting, make sure that the personal computer, all peripherals connected to the personal computer, and the camera are turned off.
- When the connection has been completed, turn on the personal computer and the camera.
- Do not unplug the Interface Adaptor during use. This can prevent the software from operating normally, and destroy any data being transferred.
- When editing on a personal computer, we recommend using the AC Adaptor as the camera's power source.

- In some cases, communications errors (including resetting of the camera) can result due to the effect of static electricity and electromagnetic waves from TVs, computers, and video games. If this happens, place the camera and Interface adaptor as far as possible from these devices. Then, turn on the camera again, exit any software applications which are running, and perform the communications settings again.

1**2****When Editing on a PC Card Drive**

If your notebook computer has a PC Card drive (PCMCIA type II), the Panasonic CardShot driver can access images shot with the CardShot and stored on a CF card.

- 1** Insert a CF card containing shot images into the PCMCIA Adaptor (supplied).
- 2** Insert the PCMCIA Adaptor into your notebook computer's PC Card drive.



Installing the Application Programme (PhotoEnhancer)

- 1** Insert the supplied CD-ROM into your personal computer's CD-ROM drive, then double-click the "My Computer" icon.
- 2** Bring up the "Setup" icon.
 - ① Double-click the CD-ROM's "Cardshot" icon.
 - ② Double-click the "Photoenh" folder icon.
 - The "Setup" icon appears.
- 3** Double-click the "Setup" icon.
- 4** After carefully reading the text that appears, click the "Next" or "Yes" Button.
- 5** Click "Full Install-Typical". When the next screen appears, click "Next".

PhotoEnhancer help page

Several functions described in this on-line help may not be available in this version of PhotoEnhancer. For information about PhotoEnhancer and software updates for the PhotoEnhancer product line-up please contact PictureWorks (U.S.A.) directly.
Telephone: (510) 855-2001

- Refer to the PictureWorks homepage (URL) to update the calendar inside the PhotoEnhancer application software.
- Contact PictureWorks directly for any inquiries concerning PhotoEnhancer application software.

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U.S.A.: (510) 855-2009

Fax: **Europe:** +3531 295 7566
U.S.A.: (510) 855-2019

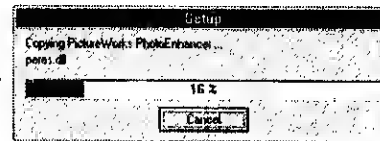
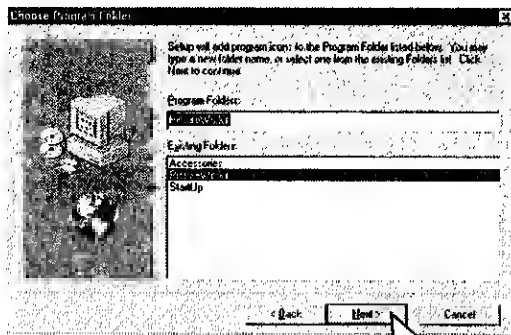
E-mail: techsupport@pictureworks.com

URL: http://www.pictureworks.com

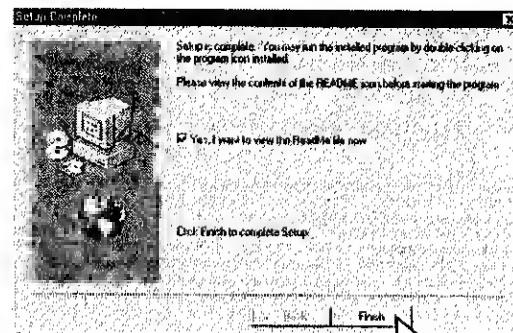
AOL: pworks ts@aol.com

CompuServe: 73661,112

6



7



6

Click "Next".

- Installation begins.

7

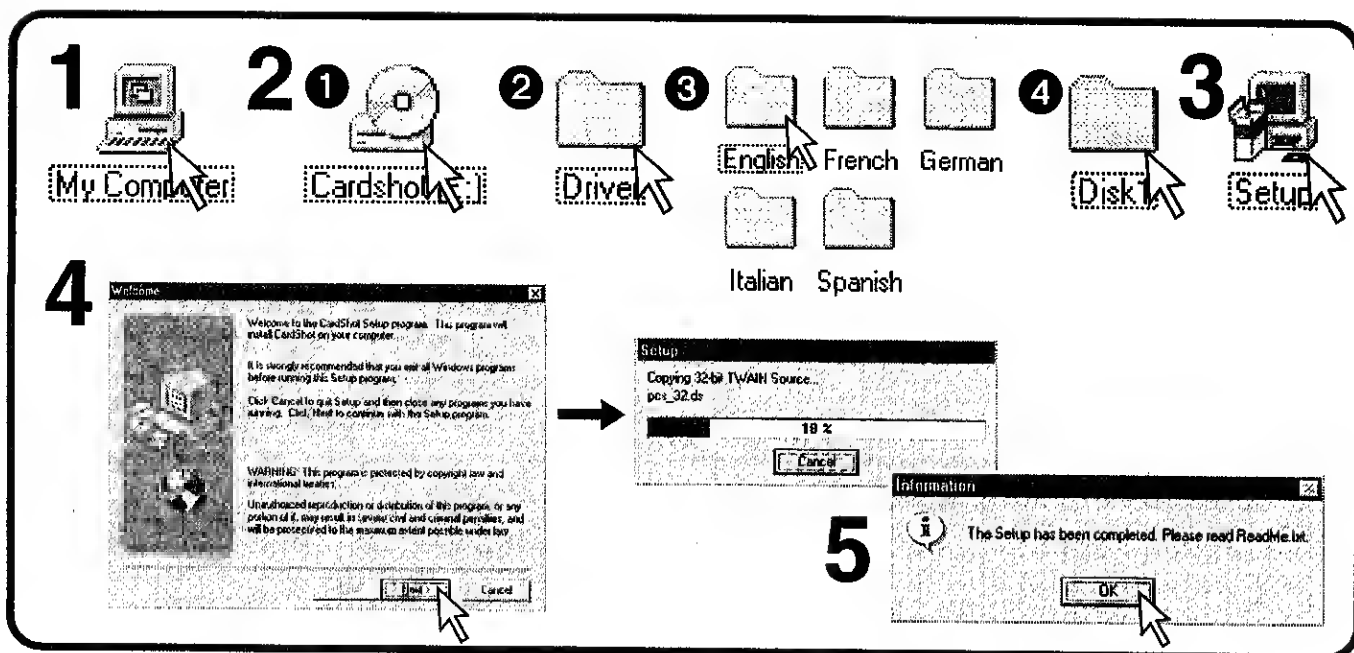
When installation has been completed, click the "Finish" Button.

- This ends the installation process.
- Be sure to read the "Readme.txt" file after double-clicking the file to open it.
- When using another (commercially available) Twain-compatible application other than PhotoEnhancer, install after reading the provided literature carefully.
- This version of PhotoEnhancer supports five languages: English, German, French, Spanish and Italian. During installation, the programme automatically selects and installs the same language as your OS.

To Select the Language Manually

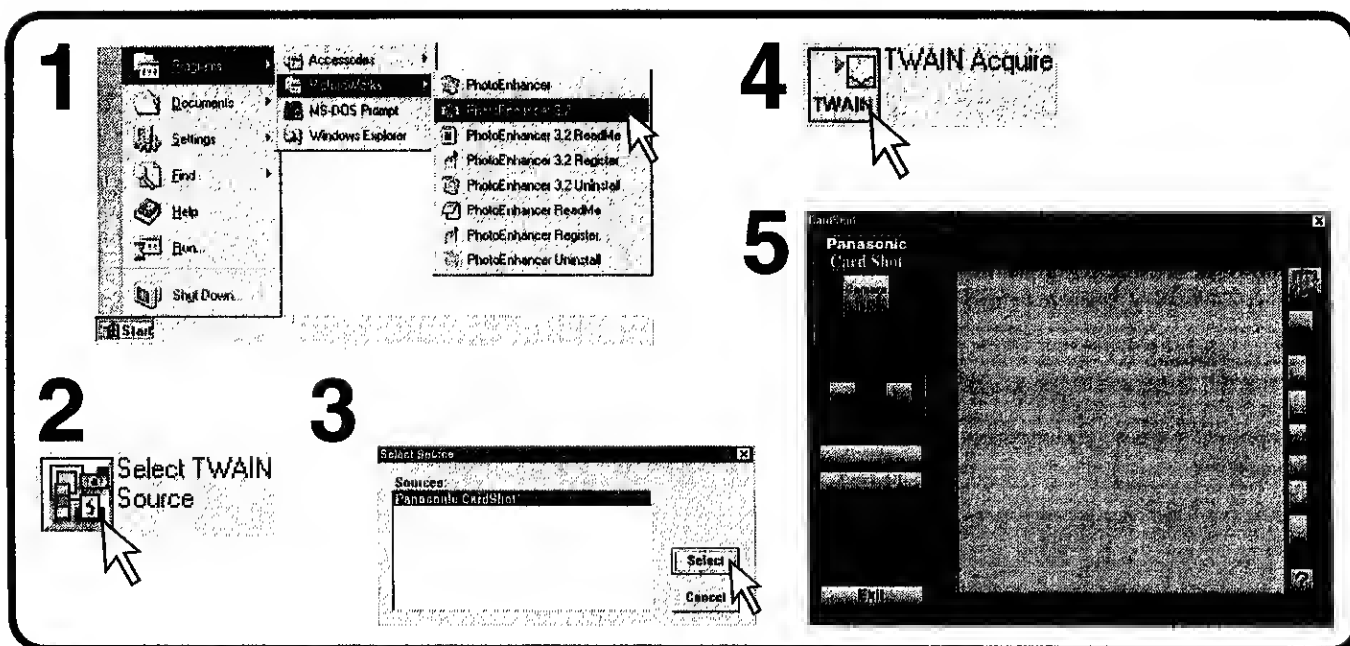
In certain regions, installation may not be possible with different regional settings. If this happens, follow the procedure below to install manually.

1. From the "Start" Button, select "Settings" and then "Control Panel".
2. Double-click the "Regional Settings" icon.
3. Select the language to be installed from among those available.
English: English [British]
German: German [Standard]
French: French [Standard]
Spanish: Spanish [Modern Sort]
Italian: Italian [Standard]
4. Click the "Yes" Button, then reboot.
5. Install the application by following installation steps 1 through 7.
6. From the "Start" Button, select "Settings" and then "Control Panel".
7. Double-click the "Regional Settings" icon.
8. Restore the original regional settings.



Installing the Driver Software

- 1** Insert the supplied CD-ROM into your personal computer's CD-ROM drive and double-click the "My Computer" icon.
 - This step is not necessary when installing the driver software after installing the application.
- 2** Bring up the "Setup" icon.
 - 1** Double-click the CD-ROM's "Cardshot" icon.
 - 2** Double-click the "Driver" icon.
 - 3** Double-click the icon for the language you wish to use: English, German, French, Spanish or Italian.
 - 4** Double-click the "Disk1" icon.
 - The "Setup" icon appears.
- 3** Double-click the "Setup" icon.
 - The "CardShot Setup" window soon appears.
- 4** After carefully reading the text that appears, click the "Next" Button.
- 5** When installation is complete, click the "OK" Button.
 - This ends the installation process.
 - Be sure to read the "Readme.txt" file carefully.



Opening the Driver Window from Inside the Application

- 1** From the "Start" Button, select "Program" → "PictureWorks" → "PhotoEnhancer 3.2".
- 2** Click the "Select TWAIN Source" Button in the "PhotoEnhancer Express" dialogue box.
- 3** In the "Select Source" dialogue box, select "Panasonic CardShot" and click the "Select" Button.
- 4** Click the "TWAIN Acquire" Button in the "PhotoEnhancer Express" dialogue box.
- 5** The Panasonic CardShot driver window opens.
 - For a detailed description of the driver window, refer to the attached driver quick-reference guide.

- This driver is used as an input plug-in for Twain-compatible applications.
- For detailed instructions for PhotoEnhancer, read the file "Photoen.hlp" (located in a folder in the device where the application was installed) by double-clicking the file to open it.
- The procedure for opening the window will differ when using a (commercially available) Twain-compatible application other than PhotoEnhancer. Carefully read the operating instructions supplied with the application you are using.

Operating Environment **(for Macintosh)**

The programme can be installed on a personal computer running Macintosh System 7.1 or higher.

Requirements:

68040 CPU or higher (recommended)

System 7.1 or higher

(Menu display speed may be slower depending on CPU performance.)

Graphics capabilities:

Approx. 16.7 million colours (recommended)

(Operation with 256-colour display possible.)

Available memory:

12 MB or more

(16 MB or more for Power Macintosh)

Hard disk space:

50 MB or more

Disk drive:

CD-ROM drive

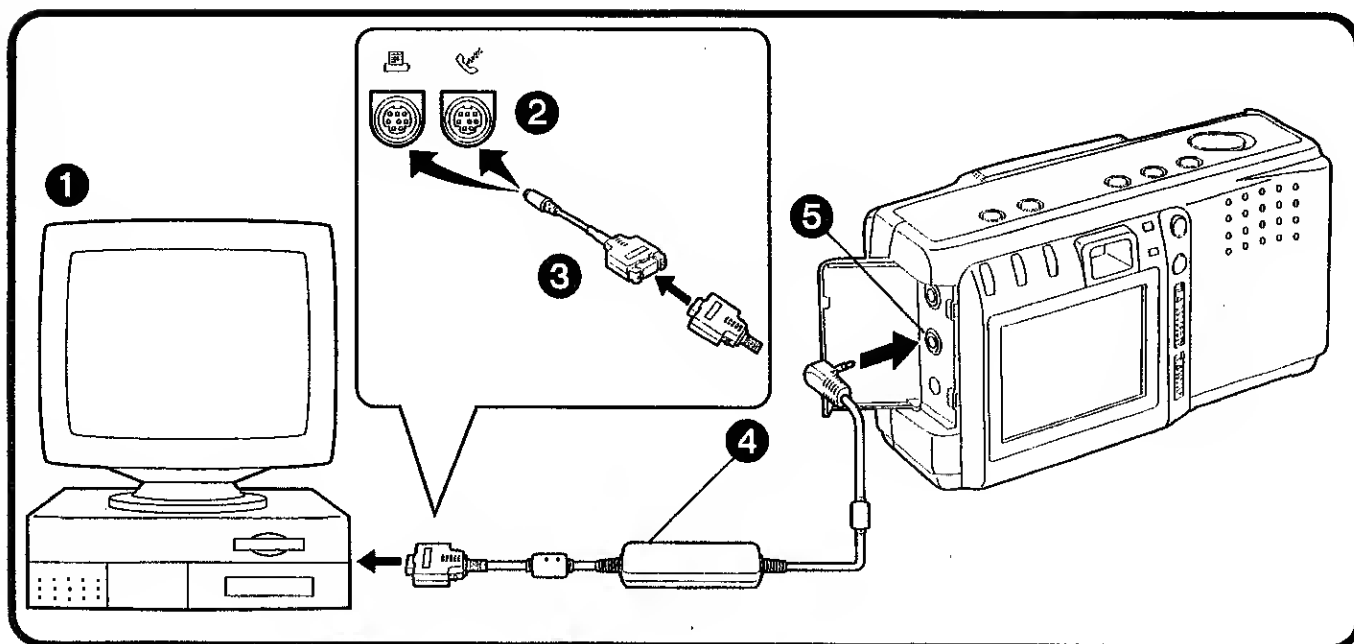
Connector:

Serial port (mini DIN 8-pin)

Conversion Cable (supplied) required

Other:

Mouse



Connections

Connect the Interface Adaptor and Conversion Cable from your Macintosh's modem port or printer port to the camera's DIGITAL IN/OUT Terminal.

- If both your modem and printer are connected to your Macintosh, one of them must be disconnected in order to proceed with connection.
- Some computer with an internal modem automatically delegate the modem port to the modem. If this is the case, connect the camera to the printer port instead.

When using LocalTalk

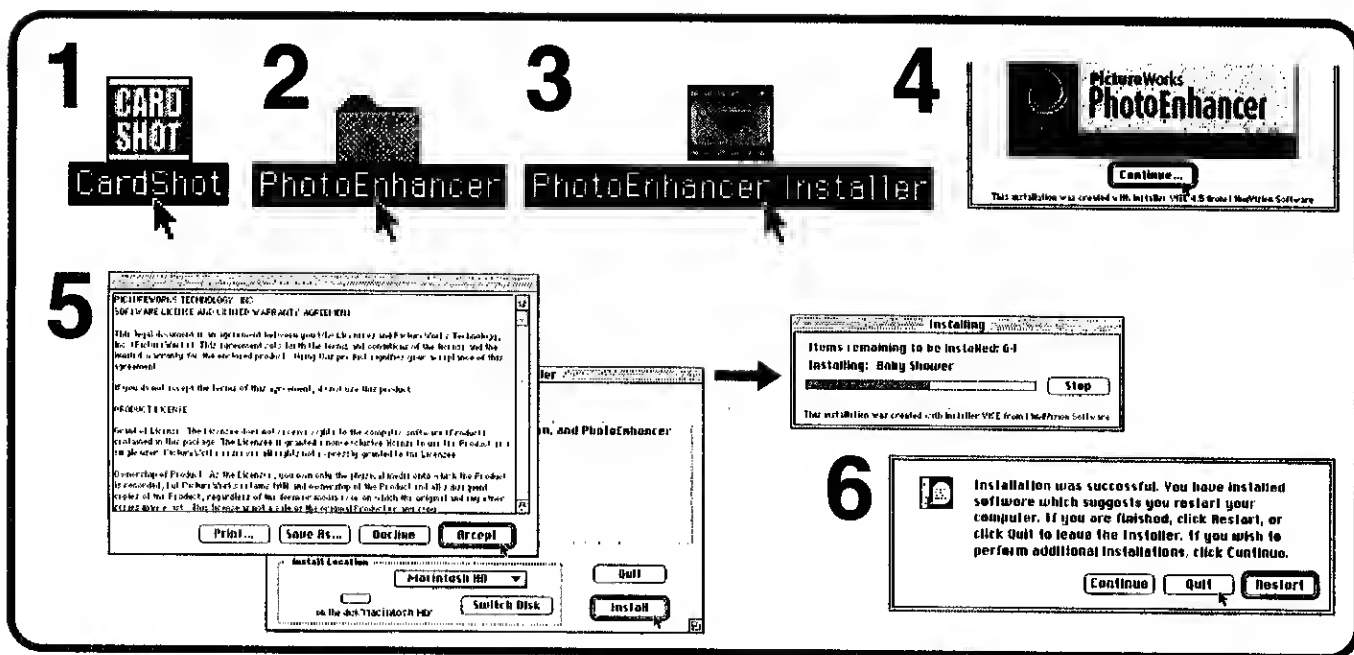
Connection to the printer port is not possible when the LocalTalk network is being used. (To use the printer port, disconnect the LocalTalk cable and disable AppleTalk.)

When running software that uses the serial port

Some programmes are automatically launched or enabled when the computer is booted, and so must be manually exited or disabled before proceeding.

- Before connecting, make sure that the Macintosh, all peripherals connected to the Macintosh, and the camera are turned off.
- When the connection is complete, turn on the Macintosh and the camera.
- Do not unplug the Interface Adaptor during use. This can prevent the software from operating normally, and destroy any data being transferred.
- When editing on a Macintosh, we recommend using the AC Adaptor as the camera's power source.
- In some cases, communications errors (including resetting of the camera) can result due to the effect of static electricity and electromagnetic waves from TVs, computers, and video games. If this happens, place the camera and Interface Adaptor as far as possible from these devices. Then, turn on the camera again, exit any software applications which are running, and perform the communications settings again.

- 1 Macintosh (commercially available)
- 2 Connecting to the printer port or modem port
- 3 Conversion Cable for Macintosh (supplied)
- 4 Interface Adaptor (supplied)
- 5 DIGITAL IN/OUT Terminal



Installing the Application Programme (PhotoEnhancer)

- 1 Insert the supplied CD-ROM into your Macintosh's CD-ROM drive and double-click the CD-ROM's "CardShot" icon.
- 2 Double-click the "PhotoEnhancer" icon.
- 3 Double-click the "PhotoEnhancer Installer" icon.
- 4 Click the "Continue..." Button.
- 5 Carefully read the text that appears, then click the "Accept" Button and then the "Install" Button.
- 6 When installation has been completed, click the "Quit" Button.
 - This ends the installation process.
 - Be sure to read the "ReadMe.txt" file (in the "PhotoEnhancer" folder) after double-clicking the file to open it.
 - This version of PhotoEnhancer supports with five languages: English, German, French, Spanish and Italian.
 - When using another (commercially available) plug in-compatible application other than PhotoEnhancer, install after reading the supplied instructions carefully.

PhotoEnhancer help page

Several functions described in this on-line help may not be available in this version of PhotoEnhancer. For information about PhotoEnhancer and software updates for the PhotoEnhancer product line-up please contact PictureWorks (U.S.A.) directly.
Telephone: (510) 855-2001

- Refer to the PictureWorks homepage (URL) to update the calendar inside the PhotoEnhancer application software.
- Contact PictureWorks directly for any inquiries concerning PhotoEnhancer application software.

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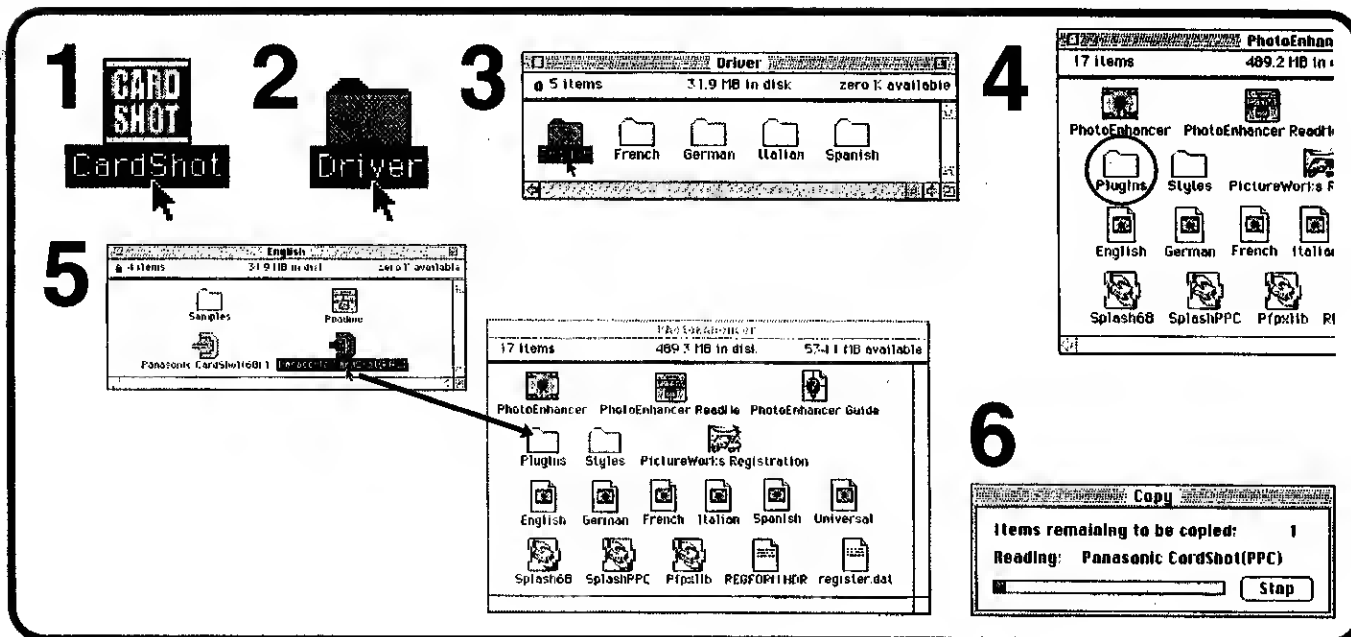
Fax: **Europe:** +3531 295 7566
U.S.A.: (510) 855-2019

E-mail: techsupport@pictureworks.com

URL: http://www.pictureworks.com

AOL: pworks ts@aol.com

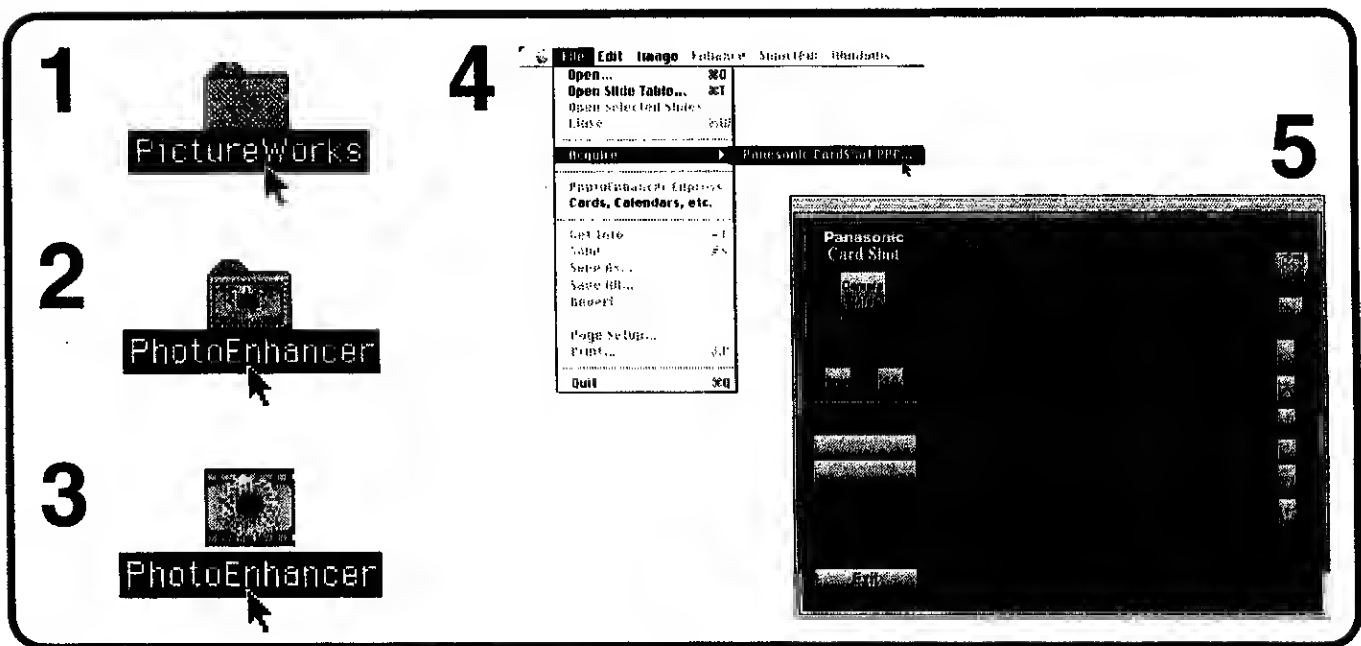
CompuServe: 73661,112



Installing the Driver Software

- 1** Insert the supplied CD-ROM into your Macintosh's CD-ROM drive and double-click the "CardShot" icon.
 - This step is not necessary when installing the driver software after installing the application.
- 2** Double-click the "Driver" icon.
- 3** Double-click the icon for the language you wish to use: English, German, French, Spanish or Italian.
- 4** Open the folder where the application has already been installed and bring up the "Plugins" folder.
 - When using an application other than the supplied "PhotoEnhancer" application, the folder names and folder configuration may differ. For details on the installation of input plug-ins, refer to your application's operation instructions.
- 5** Copy the plug-in files to the application's "Plugins" folder.
 - Copy "Panasonic CardShot (PPC)" if you are using Power Macintosh, or "Panasonic CardShot (68K)" if you are using a 68K Macintosh. The above figure shows installation of "Panasonic CardShot (PPC)".

- If the application you are running is a 68K application, copy "Panasonic CardShot (68K)" even if you are using a Power Macintosh.
- 6** The installation process is over once copying is completed.
 - This ends the installation process.
 - Be sure to read the "Readme.txt" file after double-clicking the file to open it.



Opening the Driver Window from Inside the Application

- 1** Double-click the "PictureWorks" folder.
- 2** Double-click the "PhotoEnhancer" folder.
- 3** Double-click the "PhotoEnhancer" icon.
- 4** From the "File" menu, select "Acquire" → "Panasonic CardShot PPC (or 68K)".
- 5** The driver window opens.

- Sample images in the "Samples" folder can be opened by clicking the driver window's "PC" Button and then selecting the "Samples" folder.
- For a detailed description of the driver window, refer to attached driver quick-reference guide.
- This driver is used as an input plug-in for plug-in-compatible applications.
- For detailed instructions for PhotoEnhancer, read the "PhotoEnhancer Guide", located in the PictureWorks folder.
- The procedure for opening the window will differ when using a (commercially available) plug-in-compatible application other than PhotoEnhancer. Carefully read the operating instructions supplied with the application you

Precautions

When Using the Digital Still Camera

■ Safety Precautions

- Do not disassemble or modify the camera.
- Do not allow metal pieces or highly inflammable objects to fall or enter inside the unit.
- Do not splash the unit with water or make it wet.
- Do not use the unit while driving a car or other vehicle.
- Do not use the unit in unstable locations.
- Do not place the unit on a wobbly stand, inclined surface or any other unstable location.
- Do not touch the metal parts of the unit in a thunderstorm.
- Do not point the unit's lens at the sun or a strong source of light.
- Do not place the unit where the temperature will be high.
- Follow the instructions of the airline company when using the unit on board an aircraft.
- Do not use the unit in locations exposed to oily vapors, steam, moisture or dirt, or in locations subjected to strong vibrations.

■ Operating precautions

Use the unit as far away as possible from sources of magnetic fields and electromagnetic waves (such as a TV set or game machine).

- Noise may appear on the LCD screen if the unit is used on or near a television. This is due to electromagnetic waves.
- When the unit is used near a microcomputer, the two devices may affect each other and cause picture disturbance due to electromagnetic waves.

Use the unit as far away as possible from Broadcast antenna.

- Images shot near a signal tower may suffer poor image quality due to the effects of radio waves.

Do not use the unit in the following locations:

- In a bathroom or wherever there are high moisture levels
- In a warehouse or wherever there is a high concentration of dust
- Near heating appliances or wherever the temperature is high

Do not expose the unit to insecticide sprays or other volatile solvents while they are being used nearby.

- Doing so may spoil its external casing or cause the paint or coating to peel off.
- Do not allow rubber or PVC products to remain in contact with the unit for prolonged periods of time.

This unit is not for commercial or business use.

■ Precautions when moving the unit

When carrying the unit, do not drop it or knock it against other objects

- Subjecting the unit to strong impact can damage its external casing and lead to malfunctioning.
- When moving the unit, handle it carefully. Either place it in the supplied Soft Case or pass your hand through the supplied Hand Strap to avoid dropping it.
- Placing the unit in another bag or case may cause switch settings to change. Be sure to check the image quality mode and other settings before shooting.

■ Care and maintenance precautions

Do not use benzene, paint thinner or other solvents to clean the unit.

- Before cleaning, first remove the batteries or unplug the AC Adaptor from the electric outlet.
- The surfaces of the external casing are largely made of plastic. Wiping them with benzene, paint thinners, etc. may spoil the external casing.
- Use a soft dry cloth to wipe away dust. To remove stubborn dirt, dip a cloth into a neutral kitchen detergent which has been diluted with water, wring it out well, wipe away the dirt, and then use a dry cloth to take up the remaining moisture.
- When using a chemical cleaning cloth, follow the precautions provided.

■ After use

1. Close the lens cover.
 2. When the unit is not going to be used for a long time, remove the batteries or unplug the AC Adaptor from the power outlet.
- Keeping them inside for a long period of time may result in electrolyte leaking and cause malfunctioning.
 - When the camera is to be stored, store the camera and batteries in a cool, dry place where the temperature is relatively constant. Recommended temperature range: 15 °C–25 °C
Recommended humidity range: 40%–60%

■ CF cards

Concerning different types

- “Compact Flash” is a trademark of the SanDisk Corporation. The compatibility of some commercially available Compact Flash cards has not been verified. Products bearing the “SanDisk” logo have been verified as compatible.

Handling

- Do not bend a CF card or subject it to strong force or impact.
- Do not store in locations that are hot, humid or dusty or subjected to static electricity or electromagnetic waves.
- Do not allow the terminal areas to come into contact with dirt, water or foreign objects.

Image Data

- The shot images are recorded digitally. Consequently, recorded images can be deleted and other images shot in their place.
- Images and files created with another camera or with a personal computer must be deleted on a personal computer.
- The recorded data may be lost when the user or a third party misuses the camera, when the camera is affected by static or electric shocks or when the camera has failed and is being repaired. The manufacturer assumes no responsibility whatsoever for damages resulting from loss of the recorded data.

■ LCD Screen

- The LCD Screen is a product of high-precision engineering. Effective pixels cover more than 99.98% of its surface. However, the pixels may be absent or they may remain lighted in less than 0.02% of the surface.
- Do not apply strong pressure to the screen. This may produce an uneven picture or cause malfunctioning.
- When the camera is used in a cold place, the screen may be slightly darker than usual at the outset. It will reach its normal brightness when the temperature inside the unit has risen.
- To remove fingerprints or other types of dirt on the screen, wipe gently using a soft cloth.

Concerning the fluorescent tube inside the LCD Screen

- A dedicated fluorescent tube is used as an internal lighting device inside the LCD Screen. If the screen has become dark or flickers or if the images fail to appear on the screen, it means the tube has reached the end of its service life. Replace it with a new one. Contact your Panasonic dealer about the replacement of the dedicated fluorescent tube.

■ Concerning condensation

- The lens and LCD Screen appear cloudy when condensation has formed on the camera. Take care to prevent condensation from forming whenever possible. When it has formed, follow the precautions properly.

What is condensation?

- When a bottle is taken out from a refrigerator in summer and left standing for a while, for instance, droplets of water will form on it. This phenomenon is known as condensation.

Causes of condensation

Condensation will be caused by a difference in temperature or humidity in cases, for instance, when:

- The unit is brought from a cold outdoor location into a heated room.
- The unit is taken out of an air-conditioned car.
- A cold room has been heated up rapidly.
- The unit has been directly exposed to a cool blast from an air conditioner, etc.
- The unit is enveloped in steam or placed in a very humid location.

To prevent condensation from occurring

- If you intend to bring the unit from the ski slopes into the ski lodge, for instance, or from any cold place to a much warmer place, put the unit inside a plastic bag and seal it so that no air will get inside.

If condensation has formed on the lens, etc.

- Set the CHARGE/POWER Switch to "OFF" and let the unit stand for about an hour. The cloudiness will vanish naturally once the unit has become acclimatized to the ambient temperature.

Precautions for the AC Adaptor

■ Safety Precautions

- If smoke or unusual smells are emitted or if the adaptor is abnormally hot, stop using the adaptor, and disconnect its power plug from the power outlet.
- If water has found its way inside the adaptor, stop using the adaptor, and disconnect its power plug from the power outlet.
- If the adaptor's external casing has been damaged, stop using the adaptor, and disconnect its power plug from the power outlet.
- If the DC power cord has been damaged (if the conductors are exposed, for instance), stop using the adaptor, and disconnect its power plug from the power outlet.
- Do not use the adaptor beyond the acceptable power outlet and wiring unit ratings, and use only an AC 220–230 V (NV-DCF3E), AC 230–240 V (NV-DCF3B/A), AC 100–240 V (NV-DCF3PM) power source to power the adaptor.
- Refrain from any action which will damage the DC power cord or power plug.
- Make sure the power plug is firmly and completely plugged in.
- Regularly remove dirt, etc. on the power plug.
- Do not disassemble or remodel the adaptor.
- Do not splash the adaptor with water or make it wet.
- Quickly disconnect the power plug from its power outlet in the event of a thunderstorm.
- Do not connect or disconnect the power plug while your hands are wet.
- Do not move the adaptor while it is still connected to the power outlet.
- Do not use the adaptor in locations exposed to oily vapors, steam, moisture or dirt, and in locations subjected to strong vibrations.
- Do not place the adaptor where the temperature will be high.
- During charging or operation, do not bring paper, cloths, etc., into contact with the adaptor.
- Before cleaning the adaptor or when the adaptor is not going to be used for a long time, disconnect its power plug from the power outlet to ensure safety.
- When disconnecting the power plug, take hold of the plug itself.

■ Operating precautions

- After operation, the power plug must be disconnected from the power outlet.
- Do not short-circuit the power plug.
- Do not bend the power plug out of shape.
- Do not use the adaptor in the following locations:
 - In a bathroom or wherever there are high moisture levels
 - In a warehouse or wherever there is a high concentration of dust
 - Near heating appliances or wherever the temperature is high
- Do not expose the adaptor to insecticide sprays or other volatile solvents while they are being used nearby. Doing so may spoil its external casing.
- Do not allow rubber or PVC products to remain in contact with the adaptor for prolonged periods of time.

■ Precautions when moving the unit

- When carrying the adaptor, do not drop it or knock it against other objects. Subjecting the adaptor to strong impact can damage its external casing and lead to malfunctioning.

■ Cleaning and maintenance precautions

- First, disconnect the adaptor's power plug from the power outlet.
- The surfaces of the external casing are largely made of plastic. Wiping them with benzene, paint thinners, etc. may spoil the external casing.
- Use a soft, dry cloth to wipe away dust. To remove stubborn dirt, dip a cloth into a neutral kitchen detergent which has been diluted with water, wring it out well, wipe away the dirt, and then use a dry cloth to take up the remaining moisture.
- When using a chemical cleaning cloth, follow the precautions provided.

■ After Use

- After use, the AC Adaptor's power plug must be disconnected from the power outlet.

■ Storage precautions

- Store the adaptor in a cool, dry place where the temperature is relatively constant.
Recommended temperature range:
15°C–25°C
Recommended humidity range: 40%–60%

Precautions for the Alkaline Batteries and Rechargeable Ni-Cd Batteries

- Do not disassemble, solder, puncture (with a nail, etc.), apply pressure to the batteries or subject them to any kind of machining.
- Do not throw any of the batteries into a fire or apply heat to them.
- The Exclusive Ni-Cd Batteries can be used with this digital camera only.
- The rechargeable batteries should be charged only in this digital still camera.
- When inserting the batteries, note the direction in which the polarity marks (positive \oplus and negative \ominus) are pointing, and insert correctly.
- Do not tear or remove the batteries' outer covering.
- Do not short-circuit the electrodes using a metal object, etc.
- **Only the supplied rechargeable Ni-Cd batteries will work in this Digital Camera. No other type of rechargeable battery will work.**
- The Ni-Cd batteries were not charged before shipping. Before using them, give them a full charge.
- Charge the battery in a place where the ambient temperature is within the 5°C to 40°C range.
- Do not remove the rechargeable Ni-Cd batteries from the Digital Still Camera during charging. Doing so may cause the CHARGE Lamp to stay lit constantly.
- The Ni-Cd batteries may be warm immediately after charging but this is not indicative of a malfunction.
- In order to maximize the period during which the battery will retain its charge after each charging, it is recommended that the battery be recharged after it has been used to that point where no further shooting or playback is possible.
- Recharging an already charged battery may shorten its service life.
- If the battery charge lasts for only an extremely short period after charging, it means the battery is at the end of its service life. Replace it with a new one.
- The Ni-Cd batteries may be hot immediately after use in the Digital Still Camera but this is not indicative of any malfunction.
- When the batteries are not going to be used for a long time, remove them from the Digital Still Camera.
- **Do not** allow the terminal areas to get dirty.
- When carrying the batteries around or storing them, keep them in the Batteries Case (supplied) so that the terminal areas will not be brought into contact with any metal objects.
- When storing the batteries, select a location where the ambient temperature is between 15°C–25°C.
- Avoid storage in extremely cold or humid locations or locations where oily vapors are prevalent.
- When the battery is stored for a long time, charge it at least once a year and use up the charge by operating the camera before returning it to storage.
- A spent battery still contains valuable resources which can be recycled. Do not throw it away but take it to a centre which is a participant in the Ni-Cd battery recycling programme. (Alternatively, comply with the regulations issued by your local government.)

Precautions for the Driver Software

- All rights pertaining to these operating instructions and driver software belong to Matsushita Electric Industrial Co., Ltd.
- It is strictly forbidden to copy, reproduce or transfer these operating instructions or driver software either in part or in entirety without written permission.
- These operating instructions and driver software may be used only in accordance with the Driver Software Use Agreement supplied with this product.
- The contents of these operating instructions are subject to future change without notice.
- Every effort has been made to ensure that these operating instructions and driver software are free from errors, omissions or ambiguities. However, should you come across any, please bring them to our notice.
- Matsushita Electric Industrial Co., Ltd., and its retail agents, etc., offer no guarantees whatsoever in connection with these operating instructions and driver software. Furthermore, they assume no responsibility for the results or effects which are produced by the use of these operating instructions and driver software.
- The sample data contained in the driver software is intended only for private enjoyment. The written permission of the copyright holder is required when using the sample data for commercial purposes.
- Do not take hold of the cord to disconnect it.
- Do not forcibly bend or pull the cord.
- Do not use the cord while it is stretched taut.

Before Requesting Service

Power supply

Symptom	Cause	Action	Page
No power	•The lens cover is not completely open.	•Open the lens cover all the way.	19
	•The batteries have run down.	•Use new batteries or charge the rechargeable Ni-Cd batteries.	—
	•The batteries have not been inserted the right way.	•Check out the \oplus and \ominus polarities before inserting the batteries.	10
	•The AC Adaptor has not been connected properly.	•Connect it properly.	11
No charging	•The CHARGE/POWER Switch is not in the "CHARGE" position.	•Set it to the "CHARGE" position.	12
	•The designated rechargeable Ni-Cd batteries are not being used.	•Use the designated rechargeable Ni-Cd batteries.	12, 60
Power is supplied but shuts off immediately.	•The batteries have run down.	•Use new batteries or charge the rechargeable Ni-Cd batteries.	—
	•The rechargeable Ni-Cd batteries are not sufficiently charged.	•Charge them sufficiently.	12
	•The rechargeable batteries have come to the end of their service life.	•Replace them with new ones.	—
	•The camera is being used in a cold place.	•When operating the camera in cold places, the use of rechargeable Ni-Cd batteries is recommended.	10
Power shuts itself off.	•The auto power-off function has been activated.	•Turn the camera's power off and then back on.	19, 23

Recording

Symptom	Cause	Action	Page
No shooting even when SHUTTER Button is pressed.	•The REC/PLAY Switch is not at the "REC" position.	•Set the REC/PLAY Switch to the "REC" position.	19
	•An unusable CF card has been inserted.	•Format the CF card or use another one.	40, 57
	•All the frames which can be shot have been shot.	•Delete those images which are no longer required.	38, 39
	•The Self-timer is on.	•Turn off the Self-timer.	29
	•The flash is charging.	•Wait for the flash to finish charging.	28
No image appears on the LCD Screen.	•The LCD Screen has been turned off.	•Press the MONITOR Button to turn on the LCD Screen.	22
LCD Screen display or image is not clear.	•Brightness has not been adjusted.	•Adjust the brightness.	22
	•Pressure is being applied to the LCD Screen.	•Do not apply pressure to the LCD Screen.	19
	•Dirt or dust has collected.	•Wipe it away gently using a soft cloth.	58
	•The fluorescent tube is at end of its service life.	•Consult your Panasonic dealer.	58
No focusing.	•The NORMAL/MACRO Lever is not in the correct position.	•Set it to "NORMAL".	30
No flash.	•The flash is in the "No flash" mode.	•Change the flash mode.	28

Image colour is not natural.	•The white balance is set to manual.	•Set the white balance to automatic.	31
	•The white balance is set to manual but has not been adjusted manually.	•Adjust manually.	31

Playback

Symptom	Cause	Action	Page
No playback.	•The REC/PLAY Switch is not in the "PLAY" position.	•Set the REC/PLAY Switch to the "PLAY" position.	23
	•A CF card containing shot images has not been inserted.	•Insert a CF card that contains shot images.	13
	•All shot images on the CF card have been deleted.	•Playback is not possible.	39
No automatic continuous playback.	•There is only one image.	•There must be at least two images in the camera for automatic playback.	—
No playback images displayed on TV.	•The camera and TV set are not connected properly.	•Connect the camera and TV set properly.	25
	•The TV's Input Selector has not been set to "VIDEO".	•Set the TV's Input Selector to "VIDEO".	25

Others

Symptom	Cause	Action	Page
Image deleted accidentally.	•Images cannot be regenerated once deleted.	•Make quite sure that you want to delete an Image before deleting it.	38
"FORMAT" display appears on LCD Screen when CF card is inserted.	•The CF card is unusable in its present condition.	•Format the current CF card or use another CF card.	40
No printing on Video Printer.	•The Video Printer is not connected properly.	•Read the Video Printer's operating instructions and connect properly.	43
No continuous printing from CF card.	•This feature is available only on Matsushita's Digital Video Printer NV-MPD1 (sold separately) (as of April 1998).	•Use Matsushita's Digital Video Printer NV-MPD1 (sold separately).	41, 42
	•The INPUT SELECT Switch on the Digital Video Printer NV-MPD1 (sold separately) is not in the "PC CARD" position.	•Carefully read the Digital Video Printer's Operating Instructions.	42
No image input on personal computer	•The unit is not properly connected.	•Connect properly.	45, 52
	•The personal computer's operating environment is not compatible.	•Use a personal computer with a compatible operating environment.	44, 51

Specifications

Digital Still Camera

Information for Your Safety

Power supply:	Size LR6 alkaline dry batteries×3 or Exclusive Ni-Cd batteries (chargeable in the unit)×3, Exclusive AC Adaptor
Power consumption:	4.2 W during shooting, 2.7 W during playback
Recording format:	JPEG
Recording medium:	CF (Compact Flash) cards
Recordable frames:	Approx. 11 (Fine) (when using 2 MB CF Card) Approx. 23 (Normal) (when using 2 MB CF Card) Approx. 47 (Economy) (NV-DCF3E/B/A: when using 2 MB CF Card) Approx. 59 (Economy) (NV-DCF3PM: when using 2 MB CF Card)
Deleting:	Single-frame delete, all-frame delete
Image pick-up device:	1/3-inch VGA progressive scan CCD 350,000 pixels (total), 330,000 pixels (effective)
Size of recorded images:	640×480 pixels
White balance:	Automatic/manual
Lens:	F/2.8, f=6.0 mm, 5-set 5-lens configuration
Photometry system:	TTL central focus photometry system
Exposure control:	Automatic (with manual compensation)
Shooting distance:	0.03 m-∞ (Shooting distance at macro setting: 0.03 m-1 m)
Shutter speed:	1/4-1/2,000 sec. (electronic)
Sensitivity:	ISO120 (equivalent)
LCD Screen:	2.0-inch polycrystalline LCD (521×218 dots)
Optical viewfinder:	Albada viewfinder
Shooting distance with flash:	0.7 m-3.0 m
Flash modes:	Auto, Red-eye reduction, No flash, Always on/off
Self-timer:	10 sec.
Date/Time:	Recorded with image data
Automatic calendar feature:	Through year 2037
Features:	●Mix For recording mixed images on CF cards ●Continuous Shooting ●Automatic Playback (all images or selected images only) ●Negative reversal ●Focus Window
VIDEO OUT Terminal:	Minijack, PAL colour (NV-DCF3E/B/A), NTSC color (NV-DCF3PM), 1 Vp-p, 75Ω
DIGITAL IN/OUT Terminal:	Serial interface (connected with exclusive cable)
Allowable operating temperature range:	0°C-40°C (when operating)
Allowable operating humidity range:	30%-90% (when operating)
External Dimensions:	Approx. 124×63.5×50 mm (W×H×D) (excluding protrusion, etc.)
Weight:	Approx. 220 g (excluding batteries and CF card)

AC Adaptor (NV-DCF3E)

Information for Your Safety

Power Supply: AC 220–230 V, 50/60 Hz
Power Consumption: 10 W
DC output: 6 V, 800 mA

External Dimensions: Approx. 70 (W)×58 (H)×86 (D) mm
(Excluding plug and DC power cord)
Weight: Approx. 490 g

(NV-DCF3B)

Information for Your Safety

Power Supply: AC 230–240 V, 50/60 Hz
Power Consumption: 10 W
DC output: 6 V, 800 mA

External Dimensions: Approx. 59 (W)×58 (H)×86 (D) mm
(Excluding plug and DC power cord)
Weight: Approx. 500 g

(NV-DCF3A)

Information for Your Safety

Power Supply: AC 230–240 V, 50/60 Hz
Power Consumption: 10 W
DC output: 6 V, 800 mA

External Dimensions: Approx. 61 (W)×58 (H)×86 (D) mm
(Excluding plug and DC power cord)
Weight: Approx. 490 g

(NV-DCF3PM)

Information for Your Safety

Power Supply: AC 100–240 V, 50/60 Hz
12–18 VA
DC output: 6 V, 700 mA

External Dimensions: Approx. 48 (W)×70 (H)×26 (D) mm
(Excluding plug and DC power cord)
Weight: Approx. 110 g

Interface Adaptor

Information for Your Safety

Power source: DC 5 V
Power consumption: 0.05 W